

# **OCCUPATIONAL HEALTH ISSUES OF WOMEN IN THE UNORGANISED SECTOR**

**REPORT OF THE TASK FORCE ON HEALTH  
Prepared For  
THE NATIONAL COMMISSION ON SELF-EMPLOYED WOMEN**

**Appointed by  
The Department of Women and Child Development,  
Ministry of Human Resource Development**

**February, 1988**



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## COMMUNITY HEALTH CELL

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THE NATIONAL COMMISSION SELF-EMPLOYED WOMEN

COMMUNITY HEALTH CELLS

326, V Main, 1 Block

Koramangala

Bangalore-560034

India



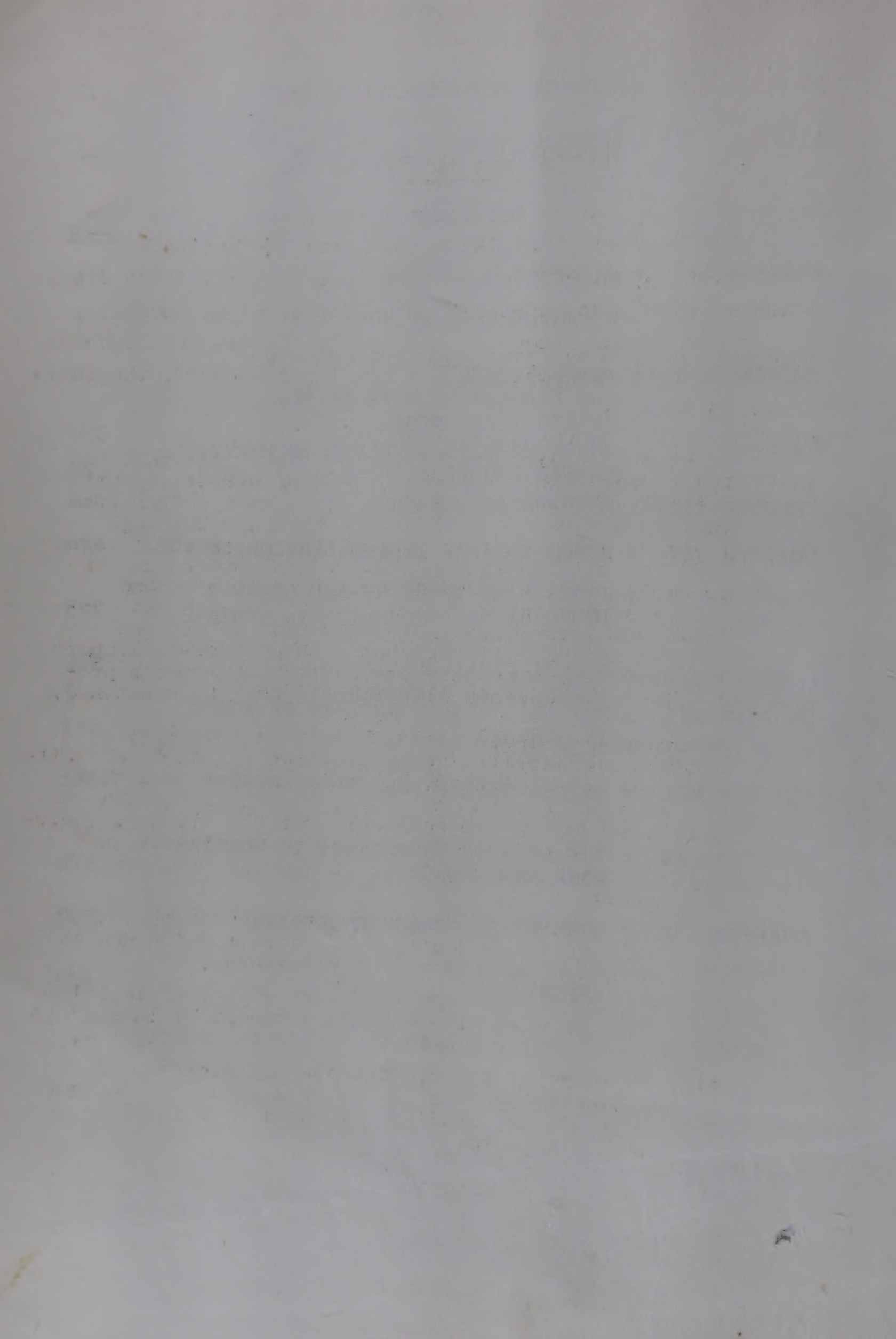
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## PREFACE

The Government of India appointed the National Commission on Self-Employed Women by its notification dated January 5, 1987 (No.F.9-110/85-WW, Government of India, Ministry of Human Resource Development, Department of Women and Child Development). In its opening statement, the notification stated:

Despite the existence of various constitutional and legal provisions safeguarding women workers, particularly in the unorganised sector, they suffer from various disadvantages relating to their working lives as well as their homes. The coverage of labour laws has not benefitted these women workers in many crucial areas, especially health, maternity and social security. With the changing social and economic conditions, women's productive roles have assumed new significance but without back-up support and services, a healthy combination of women's productive and re-productive roles cannot be sustained.

Government of India feels that it is necessary to conduct a comprehensive examination and study of self-employed women workers, as it is in this area that the lack of access to credit, marketing, health and social security, are most discernible. It has, therefore, been decided to constitute a Commission on Self-Employed Women with the following terms of reference:

- i) To examine the present status of women in the Self-Employed Sector with special reference to health, education and social status.
- ii) To assess the impact of various labour legislation on the self-employed - specially in respect of maternity benefits, health insurance, etc.
- iii) To identify the constraints on increase of productivity of self-employed women and the gaps in training, credit, upgradation of skills, marketing, etc.



- iv) To survey employment patterns, including production relations and assess their impact on the wages of the self-employed women.
- v) To undertake a survey of the effects of macro policies relating to investment, production, technology, etc. on the status of self-employed women.
- vi) To consider the link between the productive and reproductive roles of the self-employed women, with special reference to their health status.
- vii) To suggest measures relating to all sectors for removing the constraints which adversely affect the integration of self-employed women in the national development process.

In a subsequent meeting of the Commission, the meaning of self-employed women was subsumed to mean all the women in the unorganised sector. A further notification of the Government of India, Ministry of Human Resource Development, Department of Women and Child Development, dated April 1, 1987 (No.F.9-110/85-WW), was issued with the following additional term of reference.

The above terms of reference of the Commission would also cover all unprotected women labour in the country and extend to women in the unorganised sector.

The following persons constituted the membership of the Commission under the leadership of Mrs.Ela Bhatt, M.P.

1. Smt. Ela Bhatt	Chairperson
2. Dr.(Ms.)Armaity S. Desai	Member
3. Dr.(Ms.)Thamarajakshi	"
4. Ms.Mrinal Pande	"
5. Ms.Jaya Arunachalam	"
6. Dr.(Ms)Vina Muzumdar	(Subsequently resigned)

The Commission constituted several Task Force groups to accomplish the goals set up by the terms of reference. These included:



1. Task Force on Legislative Protection
2. Task Force on the Impact of Macro Policies
3. Task Force on Health
4. Task Force on Communications
5. Task Force on Workers.

Accordingly, the Task Force on Health was constituted by a notification of the Government of India, Ministry of Human Resource Development, Department of Women and Child Development, dated February 17, 1987 (No.F.9-110/85-WW(Pt.)). The membership was as follows:

- |                             |   |
|-----------------------------|---|
| 1. Dr.(Ms.)Armaity S. Desai | Convenor  |
| 2. Dr.Saroj Jha             | Co-convenor   |
| 3. Ms.Srilatha Batliwala    | Member  |
| 4. Dr.(Ms.)Rani Bang        | "   |
| 5. Dr.S.K.Kashyap           | "   |
| 6. Dr.(Ms.)Veena Shatrugna  | "   |
| 7. Ms.Manisha Gupte         | "   |
| 8. Ms. Mirai Chatterjee     | "   |
| 9. Ms.Sujata Gothoskar      | was coopted as the Research Associate. She worked full-time for the Task Force. |

More details on the work of the Task Force are given in the first chapter, "Introduction". Besides entrusting the work to several Task Force groups, the Commission adopted other measures to inform itself on the directives of the terms of reference. The Commission members visited a majority of the State and Union Territories to conduct "public hearings" among the women in the unorganised sector. Women were interviewed on farm and paddy fields, at quarries and in the small

scale sector locations like carpet/cloth weaving and tussar spinning, and at the work sites of artisans and processing workers. Meeting the women at their work sites gave the opportunity to listen to the women workers in their natural setting, to observe their working conditions at first hand and, where applicable, interview the employers, both governmental and non-governmental.

The Commission also utilised other means, such as meeting voluntary agencies working with women in the informal sector, and meeting administrators such as the Secretaries of the Departments of Welfare, Health, Education and Labour, and the Commissioners of Labour. A video team accompanied the Commission to record the meetings with the women workers. It also commissioned small research projects and papers. Additionally, it undertook to collect information from women in the unorganised sector in all the States through a questionnaire.

The work of the Task Force on Health should be situated in the overall context of this fact-finding work which the Commission undertook. The Task Force undertook this work through several means such as through a review of literature, commissioning of specific research projects and visits to work sites - independently as members of the Task Force and in the visits of the Commission by the Convener. In addition, a workshop was convened at which women's groups, and grass-roots organisations working with women in this sector, shared their information and experience with the Task Force. This report is the result of all these efforts. It is an attempt to bring together information as well as to highlight the gaps in information with respect to occupation - related problems of health.



The Task Force members express their appreciation for the excellent work done by its Research Associate, Ms.Sujata Gothoskar, without whom the work of the Task Force could not have been facilitated. The massive work of reviewing the information available through visits to various libraries and a scrutiny of literature in newspaper clippings, journals, books, research projects and monographs was done by her. A great deal of material had to be reviewed to sift out and identify information in an area which has received little attention so far- the occupational and other health problems of women in the unorganised, informal sector. Ms.Gothoskar undertook to sift through this material for the preparation of the report, distill the major findings of the commissioned research studies, and drafted the manuscript. She also integrated in the report the information gathered at a meeting of those involved in the health issues of working women organised by the Task Force. She saw the manuscript through the drafts and its final completion. She organised the meetings of the Task Force, carried on the day-to-day correspondence, organised the meetings with field workers and generally facilitated the work of the task force with her quiet efficiency and full commitment. We are grateful that Ms.Gothoskar was available to the Task Force.

Individual members of the Task Force also undertook several responsibilities. Ms.Srilatha Batliwala assisted Ms.Gothoskar with developing the framework of the report, identifying major and specific recommendations, the drafting of some sections, and liaising with commissioned researchers. Dr.Veena Shatrughna, Dr.Rani Bang, Ms.Manisha Gupte, and Ms.Mirai Chatterjee, undertook research projects on areas

in which the Task Force needed information and also contributed their suggestions and recommendations for the final report. Those projects which were completed by them before the report deadline have been included, that is, one project report of Manisha Gupte and 2 reports of Mirai Chatterjee. These are among other projects which were also commissioned by the Task Force. Dr.Kashyap contributed his special expertise in the field of occupational health.

As a Co-convener, Dr.(Ms.)Saroj Jha gave considerable support to the Task Force in its initial stages, sharing the role with the Convener for attending the Commission meetings, visiting work sites with Task Force members and accompanying the Commission on its visits to Andhra Pradesh and Karnataka, contacting medical institutions for information and participating in the initial discussions on the method of work of the Task Force. However, her assignment with the World Health Organisation deprived the Task Force of her further participation.

As a Convener, I am indeed grateful to all the members who have made the above mentioned, substantial contributions towards the work of the Task Force. It has been a pleasure to work with the group and the Convener feels herself fortunate to have had the excellent interaction and the full commitment that prevailed throughout. The members kept the greater cause of the poor, unorganised working women as the common binding force in their work as a team which made it possible to produce this report. It has been a rewarding experience to have worked as a team. Lastly, I thank my P.A., Mr.G.Jayakumar and Steno-typist Ms.Sylvia Fernandes,



both of whom facilitated the work of the Task Force, Mr.V.G. Gimonkar who typed endlessly the drafts as also the final report. Mr.Keshav B.Gamre and Mr.R.E.Borhade for stencilling the report, and the contribution of Mr.Ganpat Gotankar and Mr.Shantaram Shelar at the Tata Institute of Social Sciences.

We transmit this report to the Commission this February, 1988, in the hope that the working conditions of the women workers in disadvantaged groups, who constitute 94 per cent of working women, may benefit from the work of the Task Force on Health.

February, 1988.

- Dr.(Ms.)Armaity S. Desai -  
Member, National Commission of  
Self-Employed Women and  
Convenor, Task Force on Health  
(Director, Tata Institute of  
Social Sciences)







## ACKNOWLEDGEMENTS

Many individuals, groups, organisations and institutions offered limitless support and shared their material, experiences and time to enable us to make the report a meaningful document. It is difficult to mention them all.

In Bombay, some of the organisations to be mentioned are the Forum Against Oppression of Women, the Centre for Education and Documentation, the Build Documentation Centre, the Society for Promotion of Area Resource Centre (SPARC), the Foundation for Research in Community Health (FRCH), the Research Centre for Women's Studies, Prerana, Shakti, College of Social Work (Nirmala Niketan), Shramik Vidyapeeth and the Tata Institute of Social Sciences. In Delhi, the organisations to be mentioned are Saheli, Society for Participatory Research in Asia, and Voluntary Health Association of India. In Ahmedabad, the organisations which made a contribution are the National Institute of Occupational Health, Centre for Health Education Training and Nutrition Awareness (CHETNA), and the Self Employed Women's Association, they offered documentation services, sent materials and suggestions for the report.

Mr. Vijay Kanhere, Bombay, has put in a great deal of invisible labour, in terms of reading through and condensing documents, suggesting changes and proof-reading the final draft. His long experience in the field of Occupational Health was of immense importance.

Visiting women workers, especially out of Bombay, sitting late in the evenings in libraries and documentation

centres and working on the report, was possible only due to the immense support and cooperation of my daughter Aaloka, who also helped in arranging the heaps and heaps of reference cards, and my neighbours, the Samudras and the Narvekars, who helped in every possible way.

On behalf of the other members of the Task Force, I would also like to acknowledge the role of our Convenor, Dr.Armaity S.Desai. From the outset, she set the tone for the functioning of the Task Force with her democratic and trusting leadership. The quality of her leadership is reflected by the fact that she never imposed ideas, tasks, methods of functioning or arbitrary goals; rather, we functioned as a team in which each member defined the extent of their own role and responsibilities - including herself. In the Task Force, we were all equals working together with a shared purpose. It was a great pleasure to work with Dr.Desai!

A word of appreciation for the unflagging support of the secretarial staff of the Tata Institute of Social Sciences must be mentioned. Whether at 7 a.m. or at 11 p.m. they cheerfully undertook all the extra work, generated by the Task Force, without a word of complain - Mr.G.Jayakumar, Ms.Sylvia Fernandes, Mr.Ganpat Gotankar, Mr.Keshav Gamre, Mr.R.E.Borhade, Mr.Shantaram Shelar, and above all Mr.V.G.Gimonkar.

Most importantly, this report is almost entirely due to the effort of the women workers in many cities and villages whom we met. The women spared their valuable time and patiently talked to us about their lives, their problems and their visions about the future. We hope that this report makes at least a small beginning in realising their dreams.

Sujata Gothoskar  
Research Associate  
Task Force on Health



## CHAPTER I

### INTRODUCTION

#### The Process of Work of the Health Task Force

##### The Terms of Reference

Soon after the National Commission on Self-Employed Women (and women in the informal sector) and its Health Task Force were constituted, some members of the Task Force in Bombay met informally in March, 1987 to have a preliminary discussion on its focus of work. The first formal meeting of the entire Task Force was held on April 18, 1987.

The Task Force discussed the terms of reference of the National Commission and attempted to examine and concretise these, as would be applicable to the Health Task Force. The terms of reference of the National Commission were translated to relate to the health of women workers as follows:

- |                              |  |
|------------------------------|--|
| 1. Present status            | - with respect to health.  |
| 2. Legislation               | - protecting the health of women workers.  |
| 3. Productivity              | - contribution of women in economic terms and the cost to their health caused by the occupation. |
| 4. Survey                    | - impact on health of the various categories of working women.                                   |
| 5. Effects of micro policies | - on health status of working women.   |

6. The link between                      - with special reference to their productivity and the                      health and nutritional status. reproductive roles of women
7. Measures for inte-                      - integration of the health needs grating women in                      of women with the National Health national development                      programmes.

The Task Force also added newer dimensions to the existing terms of reference e.g. the dimension of the import of technology on women and women's health. This impact includes their displacement by men as they move into skilled jobs and women remain in manual, less paid jobs; it also includes invasive techniques like contraceptives. Technology also affects domestic workers when they no longer get food from their employers due to technological improvements like refrigeration. On the other hand, lack of technology also affects women adversely e.g. their access to water or better cooking facilities or improved tools. It also affects their work and health in terms of their posture while working.

The other issues identified were, the correlation between occupation and health and the intervening variable, such as earnings and benefits, and the status of women as earners in the family and the community.

The term "unorganised women workers" was interpreted to mean every woman not in the formal sector, who puts in labour, directly or indirectly, for her own upkeep. This labour may be paid or unpaid.



### Grouping of Workers and Areas to be Studied

On the basis of discussion, some categorisation and grouping of different occupations was attempted. It was decided that the scope of the women workers to be covered by the Task Force would include:

1. Women engaged in heavy, manual work - agriculture, mining, construction, head-loading, fuel and fodder gathering.
2. Women engaged in home-based work - housework, beedi-rolling, agarbatti-making, chikan work, block-printing, weaving.
3. Women engaged in work in the service sector and vending - domestic workers, laundry work, rag-picking, prostitution, vending of different wares.
4. Women involved in the processing industry and other industries - fish-processing, cashew, coir, slate-pencils, fireworks.

With respect to the above, the following areas were to be examined:

1. Health status
2. Occupational health
3. Accessibility to and availability of health services
4. Maternity, nutrition, income
5. Women's awareness and knowledge
6. Mental health
7. Impact of technology

### Expected Outcome

Ultimately, the review of the occupations on the health status of women workers had to achieve the following major objectives:

1. Visibility of women and gaps in information with respect to health.
2. Contribution of women to work and the effect of work on their health - the cost in terms of health for the economic contribution they make.
3. Organising strategies/delivery of health services - participation of women workers.
4. Health legislation, specially related to women workers.

It was recognised that, while objective studies could be undertaken in these areas, symptomatology was also important, especially considering the situation of women in the most unprotected strata, where hard data were not always available or identifiable.

It was decided that the objectives of the Task Force should be to concentrate on, not only 'health', but also on the general well-being of women, which would include their mental health, as well as the impact of physical and sexual violence, including sexual harassment, on the well-being of women workers in the informal sector.

### Procedures for collecting information

The Task Force members began to look into the existing literature to identify information available on



the relationship between women's health and work. Besides a survey of the literature, various sources and methodologies were adopted. They were as follows:

1. Journals, magazines, newsletters covering exclusively or including studies or reports on the various aspects relating to women, work and health.
2. Research reports and documents relating to women, work and health. Most of these related to one or two aspects of our concerns, usually indirectly, and very few had the specific focus of interest to us.
3. The Task Force wrote to all the 106 PSM(Preventive and Social Medicine) departments of medical colleges in the country. It was revealing that we received only one reply---from Vellore. It shows that there has been very little focus on the health of women specifically related to their work.
4. The Task Force wrote to 314 grass-roots organisations, including women's groups, trade unions, organisations of landless labourers and other rural organisations, as well as research institutes. Only 21 replied, although some replies continued to trickle in slowly.
5. The Task Force called a meeting of women trade unionists and women leaders in Bombay, which was very fruitful.

6. Some members visited various areas in Bombay, such as industrial estates, hutments, where women worked in various occupations. Visits were also paid outside Bombay, to Jaipur and Ahmedabad, to meet women workers who were concentrated in specific occupations.
7. The Convener and Co-convener of the Health Task Force visited different states with the National Commission, where in meetings held with women workers, the problems with respect to their health were probed.
8. The Task Force commissioned a few studies in occupations which cover a large section of women, where very little information was available. These studies appear as separate monographs and include:
  - a) Health status of women agricultural women workers - a study of one village in Madhya Pradesh.
  - b) Women's work, maternity and access to health care: a socio-economic study of two villages in Pune district.
  - c) Women, housing and health - a socio-economic study of one slum settlement in Bombay.
  - d) Health of women working as contract labour in railway yard and transshipment points at Ahmedabad.
  - e) Occupational health problems of women workers making agarbatti.



- f) Occupational health problems of women workers grinding masala.
  - g) Hospital incidence of fracture of the neck of the femur in relation to women's occupation and social status.
  - h) The experience of self-employed women with the Government health systems in the rural areas and implications for policy.
9. The Health Task Force organised a workshop for a day and a half in Bombay in which women activists and researchers from different parts of the country participated and shared ideas and information based on their work with women workers in the informal sector. The report of this workshop was sent to all the participants as well as those people who had shown interest in it, asking them to send in more information and suggestions, especially on the recommendations to be included in the final report of the Health Task Force.

The Task Force on Health had a difficult and challenging responsibility since very little literature exists on the effects of women's occupations and their health status. The above procedures enabled the Task Force to assemble the information which will also reveal the gaps and the need to undertake specific occupation - related studies.

#### Women's Work and Women's Health

The Task Force on Health approached its work by an examination of women's work in terms of the details

of the activity undertaken, the hours of work entailed, the remuneration, if any, and the effects of all these, on their nutritional status and physical as well as mental health. To understand the issues pertaining, to the nature of a woman's occupation, it was necessary to analyse it in terms of the physical stresses involved in the movements required, the postural positions, and their effects, and the noxious materials used. Long hours and inadequate wages further exacerbate the occupational related health problems of women and, hence, were also examined with respect to the occupation under discussion.

The working environment was examined in relation to its effects, such as lack of adequate lighting, insanitary conditions, poor air flow, working in the open elements and such other factors likely to affect her physical condition. Mental stresses were also viewed with respect to the factors associated with their work. Lastly, it was essential to examine those benefits and protective legislation, which affect women's health, such as minimum wages (as purchasing food and adequate, nutritional status are directly related to them), access to health services, maternity benefits, and creches (which decrease her tension with respect to child care while at work).

### Contribution of Women to the Economy

All women work, whether they are wage labourers or not. Labour in the home is not only reproductive and social with regard to the upbringing of the family and care-taking functions, but also productive, as women's



work replaces goods and services which would, otherwise, be purchased in the market, such as fetching water, gathering fuel and fodder, grinding cereals, maintaining cattle, kitchen gardening, weeding, winnowing, harvesting, and a myriad other functions such as tailoring, maintaining the house structure and repairing it and tutoring children. Hence, it can be said, very confidently, that there are fewer women than men who do not work at all. In fact, if women work outside the home, they are consistently working a double (and when children or others in the family are ill, a triple shift), day after day. On an average, women have much longer total hours of work than men. (Voluntary Health Association of India, 1987). One-third of women, at least, and in some instances, a higher proportion, are the sole-supporters of their families.

This fact has been brought out in many research reports. A recent study of two villages, sponsored by the Health Task Force of the Commission, in a chronically drought-prone area in Maharashtra, also very clearly brings out the contribution of the women workers in the economy of the area. The major source of income for women in this area was work in the Employment Guarantee Scheme. The men went in for work on private sites. For the same work, women received less than half of what the men received. Yet, in 20 per cent of the households women's income was 100 per cent of family income. In another 20 per cent households, women's income constituted at least 50 per cent of the family income. In effect, it meant that women worked at least twice as much as the man in economically productive work, and her income was the mainstay of the family's economy.

On the other hand, the women were also responsible for almost 100 per cent of the housework - "socially productive labour". They were also responsible for 100 per cent of the "reproductive labour" - the bearing and rearing of the children. (Gupte and Borkar, 1987).

Thus, the contribution to society made by their work is far greater than that of men. Though fewer women than men have opportunities to work outside the home, the work which women do within the home - cooking, washing and cleaning, caring for children and the old, nursing the ill, fetching fuel and water, is work which is crucial to the survival of society. If women stop doing this work and no one takes it up, all manner of production, transport, construction, food-production and so on will come to a standstill, disease and hunger will spread, and very soon people will start dying. So, if we look at the social usefulness of their work alone, it appears as if women ought to have more bargaining power than anyone else, because it is their work which produces nurtures and sustains the people, who produce everything else, including profits. But this is not at all the case. In fact, quite the opposite. (Rohini, P.H., et al, 1983)

The fact that women are house-workers as well, affects their status within wage-work adversely. It confines them to badly paid work, and marginal jobs which are supposed to be 'women's work'. Though women-headed households constitute a large and growing proportion of households in the country, yet, the idea of the working woman only "supplementing" the household economy has become a structural feature of the job market and, despite legislation, women continue to be pushed into low-paying categories of jobs which remain low-paying because women



work in those jobs. Instead of enhancing women's status, each of the different roles women play while performing the different aspects of social labour, works against the other roles. This is reflected, among other things, in the fact that women have to work up to the last day of pregnancy and return to work within a month, endangering their own health and that of their children. (Mobile Creches, 1987; Manohar, 1983). This vicious circle, rather than being broken, is supplemented by other factors, thus depressing the situation of women further. The truth is that the contribution of women to the family and to the economy has not been evaluated, quantified or even recognised. One has merely to shut one's eyes and visualise an all-women's strike for just a couple of weeks and see the massive chaos, destruction and havoc that would ensue - at least a couple of times greater than an all-men's strike.

The following tables about the extent and numbers of women employed in various industries are obviously gross underestimations resulting from under-enumeration, the reasons for which are indicated in this report. These tables are included here merely because this is the only available statistical statement about the number of women in different industries and secondly because they indicate the type of 'industries' unorganised, under-paid and requiring a specific type of "women's skill", where women are employed.

Table 1.1

## INDUSTRIES WITH HIGH PARTICIPATION OF WOMEN

Sl. No.	Intensity of Women Proneness	Description of the Industry	1971 Women Employment adjusted ('00)
1.	40% to 50%	Coffee plantations	700
		Manganese Ore Mining	241
		Manufacture of other edible oils and fats e.g. mustard oil, groundnut oil, til oil	1262
		Coffee curing, roasting and grinding	57
		Manufacture of bidi	5317
		Cotton grinding, cleaning and boiling	405
		Manufacture of all types of thread cordage, ropes, twins nets	591
		Embroidery and making of crepes, lace fringes	416
		Domestic services	8921
		Laundries, Laundry services, cleaning and dying plants.	6661
2.	50% to 60%	Tea plantations	5683
		Rearing of pigs and other animals	231
		Rearing of ducks, hens and other birds and production of eggs	171
		Rearing of bees, production of honey and wax	43
		Manufacture of grain mill products	3511
		Weaving and finishing of cotton textiles in handlooms other than khadi	11504
		Wool spinning, weaving and finishing in mills	
		Sanitation and similar services	2415
3.	60% to 70%	Production of ganja, cinchona, opium etc.	1139
		Manufacture of dairy products	1142
		Tobacco stemming, redrying and all other operations connected with raw leaf tobacco for manufacture	529
		Manufacture of matches	413

....Contd..



Contd....

Sl. No.	Intensity of Women Proneness	Description of the Industry	1971 Women employment adjusted ('00)
4.	70% to 80%	Rearing of Silk Worms, production of cocoons and raw silk	482
		Production of fuel by exploitation of forests	504
		Gathering of uncultivated materials e.g. gums, resins, lac, barks, herbs wild fruits and leaves by exploitation of forests.	278
		Wool spinning and Weaving other than in mill	850
		Manufacture of mica products	146
5.	80% to 90%	Gathering of fodder by exploitation of forests	126
		Canning and preservation of fruits and vegetables	434
		Manufacture of coir and coir products	3012
6.	90% to above	Tobacco plantation	228
		Cotton spinning other than in mills (charkha)	6431
TOTAL			63055

Source: Report of The Working Group on Employment of Women (set up by the Planning Commission) Women's Welfare and Development Bureau, Department of Social Welfare, Government of India, New Delhi, 1978, pp.47-48 .  
(quoted in Patel, undated).

Table 1.2

URBAN INDUSTRIES WITH FEMALE EMPLOYMENT IN 1971 ABOVE THE MODE\*  
AND WITH VERY HIGH GROWTH RATE IN 1961-1971

Sl. No.	INDUSTRY	Employ- (00) ment in	
		1961	1971
1.	Collection of pearls, conches, shells, sponges and other sea-products	5	4040
2.	Metal ore, mining other than iron ore manganese ore and gold and silver	1	50
3.	Manufacturing of wooden and cane boxes	3	622
4.	Manufacturing of wooden cane & bamboo furniture	12	137
5.	Manufacturing-copper, brass, aluminium etc.	2	12
6.	Manufacture of agricultural food & parts except electrical machinery	9	95
7.	Manufacture of machine tools, their parts and accessories	3	27
8.	Manufacture of electrical apparatus & appliances, X-ray apparatus and electrical machinery	13	84
9.	Manufacture of radio & television, electronic computers and its components	13	166
10.	Manufacture of motor vehicles, scooters and their parts	4	36
11.	Manufacture of aircrafts and its parts	2	20
12.	Manufacture of medical, surgical and scientific equipment	2	17
13.	Distribution of electrical energy to household and other users	10	87
14.	Wholesale trade in straw and fodder	1	12
15.	Wholesale trade in building materials	1	13
16.	Retail trade in fuel and other household utilities and durables.	5	94
17.	Retail trade in food tobacco, beverage not elsewhere classified.	3	392
18.	Transport by rickshaw puller, porters, coolies, handcart pullers etc.	214	1217
19.	Telephone communication	33	166
20.	Banking and other credit institutions	20	272

\* Mode is the employment size in the largest number of industries and is estimated to be 800.



Table 1.3

INDUSTRIES WITH EMPLOYMENT IN 1971 ABOVE THE MODE\* AND WITH  
STEEP DECLINE IN 1961-71

Sl. No.	INDUSTRY	Employ- ment	
		1961	1971
1.	Production of fruits, coconuts e.g. apples, grapes, oranges, mangoes etc.	29	13
2.	Cattle and goat breeding, production of milk rearing of horses, camels	423	175
3.	Manufacture of dairy products	154	24
4.	Canning and preserving fruits and vegetables	81	13
5.	Jute and Mesta spinning and weaving	86	26
6.	Manufacture of made up textile goods (except garments)	86	19
7.	Water supply	19	9

Source: Report of the Working Group of Employment of  
Women (set up by the Planning Commission)  
Women's Welfare and Development Bureau, Depart-  
ment of Social Welfare, Government of India,  
New Delhi, 1978, pp.49-50.

(Quoted in Patel, undated).

The above statistics regarding the contribution of women's work is not even the tip of the iceberg. On the contrary, the figures indicate not the extent of women's labour, but only the extent to which it is even marginally recognised and paid. It indicates that a greater part of it, is unpaid and that the burden and loss is women's alone.

In order to record the work that women actually do and the number of women workers in the country, the method, basis and definitions of the census should truly reflect the complexity of women's lives and work. This is an urgent necessity.

This situation is all the more true regarding the health status of women, especially that of the vast majority of labouring poor women - those who are unorganised, self-employed and remain unprotected. This section constitutes more than 94 per cent of the women workforce of this country. It is increasing each year, as less and less women continue to be absorbed in the "formal" sector. (Gothoskar and Banaji, 1984). Besides, the few opportunities available, especially to the women in informal sector to participate in other areas of life, depends crucially on their access to the opportunity to be healthy. On the other hand, the obstacles to their achieving even the simple state of well-being are tremendous and emanate from almost every institution and structure with which they are in relationship even remotely. Poor women have no access to education or training; and in order to make both ends meet, they have to work, most often in the unorganised industry, where working hours are long, and the pay is meagre. They have little choice to refuse jobs which are hazardous to



their health. On the other hand, they cannot take time off from their work, either for illness, or before and after their delivery. (Manushi, 1980). Their access to health care is reduced considerably by the distances to health care facilities, to get enough time to go there, to make the other members of the household interested in their health needs, and the costs. (Murthy, 1980). All these factors play against them. These very factors make the women more vulnerable to various chronic and acute illnesses, most of which, like anaemia, they carry and suffer along with them, till they become ~~severe~~ and fatal. (Shatrungna, undated).

Very little documentation exists regarding the health aspects of women's work, simply because it is not considered important enough. Though women have begun to challenge their oppression individually and collectively in different fields of their lives, the women in the unorganised sector face a gigantic task due to the precarious nature of their existence and of their means of livelihood. Most of the meagre attempts at documentation have been largely due to the efforts of small voluntary groups and committed individuals and these relate largely to the experiences of the women workers. More detailed research is an important aspect of the follow-up of the present effort.

In the next chapters, some of the occupations, on which information could be identified through the various sources will be discussed with respect to the problems of health associated with those occupations.

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## CHAPTER II

### WOMEN WORKERS INVOLVED IN HEAVY, MANUAL LABOUR

According to the Encyclopaedia of Occupational health and safety of the ILO, the capacity of women for sustained heavy physical work is substantially lower than that of men.\* If women carry excessive loads, their intra-abdominal pressure may rise suddenly and cause disturbances of the blood circulation in the pelvic organs and lower limbs, menstrual disorders, prolapse, mis-carriage or still birth. These disorders are more common if a woman has been carrying heavy loads from an early age. Unfavourable effects on the normal formation of the pelvic bones, resulting in a flat and narrow pelvis, have also been observed. (International Labour Organisation, 1983, pg.1290).

Besides, careless manual load handling is not only the biggest single cause of industrial accidents, but there is also a considerable risk of injury to the spinal column and adjacent muscles, particularly in the lumbar region. The circulatory organs may also be affected; the pulse rate and blood pressure rise and brain haemorrhage has also been reported. The constant strain and stress on muscles, joints, ligaments and bones also cause deformities. Constant pressure on the skin, muscles or nerves leads to callosities, neuritic pains and paralysis. (International Labour Organisation, 1983, pg.1290).

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\* The discrimination against women for centuries in terms of nutrition, opportunities, health care....may have resulted in a lowering of their capacity to do heavy work.

In children, and adolescents, strenuous work may affect bodily growth, especially skeletal growth. Deformities of the spinal column, pelvis and thorax may occur. As the growth of the musculatory and circulatory systems is often unequal, stress on these systems during childhood and adolescence may have permanent sequelae.

Many countries have introduced legislation covering the manual lifting and carrying of heavy loads by at least certain categories of workers, in particular women and young persons. There are often special provisions for pregnant women. (ILO, 1983, pg.1291).

In Madras e.g. the maximum limit for men is 75 kg. Maharashtra has prescribed a limit of 55 kg. in accordance with that of the ILO (Maximum Weight Recommendation, 1967 (No.128)). This recommendation does not lay down a maximum weight for women, but suggests that it should be substantially less than that permitted for adult male workers (about 50 per cent less), and that women should not be assigned to regular transport of loads. In principle, it also prohibits the employment of women on load transport during pregnancy and for the 10 weeks following confinement. (ILO, 1983, pg.1291).

However as with most "well-meaning" legislation in our country, this piece has also remained on paper and is violated with impunity. In fact for more than 96 per cent of the women in this country, there only seems to be a choice between death or morbidity due to heavy work or the same due to starvation. The provision for maternity leave for every women is an absolute must if even some



of the precautions for women's health have to be taken seriously. As most women doing hard labour have said "We have to work till the last day of pregnancy in order to be able to eat to live". This was reiterated to the Commission on all its visits by the women in the unorganised sector, including those involved in heavy manual work.

Women and children, however, continue to be employed in extremely heavy and strenuous work, without any precautions to offset the bad effects on their health and general well-being. Women are employed as head-loaders, as workers in brick-kilns, in the construction industry, as hand-cart pullers.....Women have to walk long distances carrying loads of wood-fuel and water.

### Agriculture

An overwhelming number of people in India, about 80 per cent, live in rural areas. Most of India's women are from small peasant and landless agricultural labour households. Hence, agriculture remains the major economic activity for women in this country. According to the census of 1971, 80.1 per cent of women workers were engaged in agriculture. In rural areas they constitute 87 per cent of the female work force. In urban areas, their proportion is 17.5 per cent. On the whole, about 25 million women are engaged in agricultural occupations, and are mainly employed as agricultural labourers. (Department of Science and Technology, 1984,pg.9).

As agricultural activity, extends throughout the length and breadth of the country, where the situation

varies considerably in terms of land ownership and holdings, capital investment, land reforms, specific historical development, as well as caste, class, religious and ethnic differences, it is extremely difficult to make generalisations about the situation and problems of women agricultural workers.

However, their most basic struggle revolves around trying to get enough to eat for their families and for themselves, and procuring the most basic necessities of life such as food, fuel and water. "Hovering precipitously on the brink of survival, the struggle is made even more grim because, as women, they have very little control over the conditions and products of their labour". (Kishwar and Vanita, 1984,pg.1).

### Agricultural Work

The operations and tasks in the farms and fields vary widely depending on such factors as the crop pattern, nature of land, irrigation facilities, and capital invested.

However, in almost all parts of the country, even agricultural activity is characterised by a sexual division of labour (Chattopadhyay, 1982, pg.52-54). Some tasks are done exclusively by women and are often back-breaking and low-paying, e.g. transplanting (Gulati, 1981). Some jobs are done by men and are better paid and involve the use of implements or tools e.g. ploughing (Chattopadhyay, 1982). While there are a number of jobs which are done by both men and women, like levelling the fields, hoeing and sowing, women are inevitably paid less than the men.



(Chattopadhyay, 1982). In the twelve villages of Sriniketan, West Bengal, where the main crops were paddy, wheat, sugar-cane and potato, men were paid Rs.3/- and women Rs.2.50/- per day, for tasks like levelling the fields and weeding of potato and wheat crops. Out of the 36 operations involved in agriculture, the operations performed mostly or only by men, numbered 18, the operations performed by both men and women, numbered 13 and those performed only by women, numbered 5. In all the operations performed by men, the wages were higher than the operations performed only by women. This was also the case when both men and women were involved in the operation. (Chattopadhyay, 1982, pg.52-54).

The report of the Committee on the Status of Women, 1974, had observed that:

The most important reasons for the low rates of wages, particularly for women labour in agriculture are the unorganised nature of farm labour, the ease with which hired labour can be substituted by family labour, the seasonal nature of the demand for labour and the traditional classification of some jobs as the monopoly of women. As per the Minimum Wages Act, 1948(2nd Schedule), minimum wages are to be fixed by State Governments for agricultural labour and the rates are to be reviewed periodically at intervals not exceeding five years. There are still some State which have not brought large areas of agricultural employment within the ambit of the Act. The machinery for the fixation and enforcement of minimum wages is not uniform. The National Commission on Labour had criticised the inadequate implementation of the Act. The reasons for this, in their view, lay in the poverty and illiteracy of agricultural labour, the casual

nature of their employment and their ignorance of the law, all of which apply particularly to women. According to the Census of 1971, 92.1 per cent of the women workers in rural areas are illiterate. Because of these handicaps, agricultural labour as a whole, and women in particular, are not able to employ methods, now common to industrial labour, to improve their bargaining power. There are considerable disparities in wages between men and women, depending upon the region, the crops and the bargaining power of labour. (Committee on the Status of Women in India, 1974, para 5.054).

As observed by the National Commission on Labour, "the fixation of statutory minimum wages by the Government has tended to narrow the gap between wages of men and women". The Commission, however, noted the continuation of wage differentials between men and women, particularly in agriculture. "In the larger sectors where women are employed viz, agriculture and small industries, evidence shows that in fixing wage rates some State Governments have not been free from discrimination against women". (Committee on the Status of Women in India, 1974, para 5.055).

Apart from the differentials in wages for the same jobs, discrimination against women is strengthened by having lower rates for the jobs traditionally done by women, viz., sowing, weeding, transplanting, winnowing, threshing and harvesting, as against ploughing normally done by men only. The other factor that contributes to the low wages of women is the practice of identifying a work day as equivalent of 7 to 9 hours. Many women are unable to report for duty on time because of household responsibilities, and do not get the full rates. Often, half an hour's delay could lead to a loss of half day's wage. (Committee on the Status of Women in India, 1974, para 5.056).



However, as late as 1987, where the National Commission on Self-Employed Women went and met women agricultural workers in different parts of the country, the situation had not improved. In Jammu and Kashmir, the Commission was told, while men were paid Rs.15/- per day, women were paid merely Rs.10/- for the same work. In Assam, men were paid Rs.12/- per day and women Rs.8/- per day, again for the same work.

In Hamirpur Ruru, women (and children) carry out the back-breaking task of transplanting paddy, while men concentrate mostly on the job of picking seedlings, which is considered skilful and demanding the application of physical strength. Men receive more wages and their jobs are graded higher .(Kelkar,1985).

The disabilities of women workers in agriculture stem from their occupational immobility caused by a variety of economic and social factors. The absence of alternative opportunities for employment in the rural sector, has been intensified by the decline of traditional handicrafts and cottage industries. Disappearance of many of these industries has led to a loss of skills, as a result of which, the majority of the women workers in the agricultural sector do not possess any skills other than the traditional agricultural and household ones. The large majority of women agricultural workers have to remain in their villages seeking occasional employment available within short distance of their homes, thus, reducing their opportunities to seek available or better employment. Apart from their family responsibilities and

socio-psychological reluctance to move out of the familiar habitat, for many of them such a decision is directly forced because of the status of their husbands or sons as attached labour.(Committee on the Status of Women in India, 1974, para 5.058).

Another problem which has affected women's lives adversely is their access to land. Despite their being the mainstay of agricultural operations, their rights to land are limited and subject to the arbitrary decisions of the adult male members of the family. The result is that women, among the poor, bear the brunt of destitution and starvation.

There has been a sharp decline in the number and proportion of women cultivators and an increase in the ranks of agricultural labourers over the last few decades.

Table 2.1

## DISTRIBUTION OF WOMEN WORKERS IN AGRICULTURE 1951 &amp; 1971

Category	1951 No.of female workers	%age of total No. of female workers	1971 No.of female workers	%age of total No. of female workers
1. Cultivators	1,83,67,875	45.42	92,66,471	29.61
2. Agricultural labourers	1,26,93,671	31.39	1,57,94,399	50.46
TOTAL		76.81		80.07

(Source: Committee on the Status of Women in India, 1974, para 5.051 and table X).



The increase in the number of agricultural labourers from 12.6 millions in 1951 to 15.7 millions in 1971, a shift from less than one-third to more than half of the total women work force, is the greatest indicator of increasing poverty and reduction in the level of alternate employment and not of improving rights and opportunities for economic participation. (Committee on the Status of Women in India, 1974). The average opportunity for employment available to women agricultural labourers is indicated in the following table:

Table 2.2

EXTENT OF EMPLOYMENT OF MALE AND FEMALE AGRICULTURAL WORKERS  
BELONGING TO AGRICULTURAL LABOUR HOUSEHOLDS: BY  
PAID HUMAN DAYS IN A YEAR

	Agricultural Employment (Paid Human days)		Non-Agricultural Employment (Paid Human days)	
	Men	Women	Men	Women
First Agricultural Labour Enquiry 1950-51	189	129	20	14
Second Agricultural Labour Enquiry 1956-57	194	131	28	10
Rural Labour Enquiry 1964-65	217	149	25	11

(Source: Committee on the Status of Women In India, 1974, para 5.052 and Table XI).

This is particularly true of the scheduled castes and tribal women. According to the census of 1961,

42.9 per cent of women workers from the scheduled castes were agricultural labourers.

In the rural development strategies, both at the local and national levels, women are perceived as basically peripheral to agricultural and rural development programmes, and "their multiple roles and work in the rural economy are generally ignored in the androcentric environment of planning and policy making". (Kelkar, 1985).

To begin with, the labour force participation data, or employment/unemployment data for women, ignores the majority of rural women, who attend to unpaid domestic work and those who are engaged in the free collection of goods (vegetables, roots, fish, fire-wood, cattle-feed) and in providing services (sewing, weaving, maintenance of kitchen gardens, orchards, poultry, dairy).

Though many of these women, who are already overburdened with their work for a subsistence, may not be in a position to be actively seeking work or regarding themselves as available for wage work (classifications introduced by the National Sample Survey), their labour inputs undoubtedly add to the gross domestic product. The total number of rural women in the age-group 15-59, engaged in such domestic work, is estimated at 43.8 million, and those engaged in free collection of goods and services is estimated at 26.6 million during 1977-78. (Ministry of Agriculture, 1980, pg.2.)..

The 'development efforts' by the government have affected different sections of women in different ways, but very few of them positively.



### Women of Affluent Land-Ownning Families

While there has been some expansion and utilisation of educational and health facilities among this section of women, they have little autonomy to make decisions for themselves. Available data also indicate that the 'social' pressure on these young women continues to propogate high fertility and son preference as an essential part of their obligation and, perhaps, the only instrument to maintain their position within the family.

When planned development brings greater prosperity to these families, the work load on the women increases, particularly in post harvest operations. As agricultural produce goes up, the number of milch cattle increases and some new types of crops require longer processing. Yet, this increased work-load remains invisible. Secondly, with increasing commercialisation, the cash returns from their surplus produce is received by men, reducing women's control over material resources. In the traditional economy, they could exchange grains and other commodities to buy things for themselves or for their daughters. Thirdly, increasing prosperity has not reduced the burden of their household chores. (Ministry of Agriculture, 1980, pg.4).

### Women in the Poorer Groups

Among the landless agricultural labourers, the marginal farmers, the artisans and the service castes,

whose common characteristics are poverty and virtual lack of assets, a constant battle with insecurity, unemployment and under-employment

and consequent indebtedness, over extended work days, low wages and low returns for their labour. Most women in this category, even if they have marginal assets in the way of land or tools, have to supplement their income by working as wage labour. They are most vulnerable to changes in the mode or relations of production, to natural disasters, and the rising gap between their consumption needs and real incomes. Poverty, lack of time and their low social status prevents any access to educational, health or any other services available for their development. Wage discrimination is the rule rather than an exception. When they engage in wage work as a part of the family team, very often the wages are given to the men, and women are not able to control the expenditure. Shrinking employment opportunities resulting from introduction of new technology (e.g. mechanised threshing, husking, oil milling etc.), introduction of chemical weedicides or pesticides leaves them to swell the ranks of migrant labour both to rural areas and to cities. There is evidence to show that many of them get trapped into anti-social, illegal, degrading or criminal activities. This is the group which has benefited least from development. Many have been affected adversely. (Ministry of Agriculture, 1980,pg.6).

This is not due to "development" but the manner and the entire rationale of development, which has no concern for, no planning about the effects of the process, and the results of development, on the poorer sections and women, and especially the poorer women in the rural areas, who form the largest "workforce" of this country.

### Production, Reproduction and Social Labour of Women in Agriculture

The responsibility of running the household and child-care falls almost entirely on women in almost every



part of the country. Household work in rural India involves several hours of back-breaking labour, toil and drudgery. The simple task of lighting the fire for a simple meal, may mean hours of walking to procure firewood or other fuel and then to procure water . These jobs are seldom, if ever performed by men.

The culturally accepted division of labour within the family leaves the collection of household needs like fuel, fodder and water to women. As these become increasingly difficult to obtain, women have to spend an inordinate amount of time foraging for them and all this has to be undertaken in addition to household work - cooking and child rearing - agricultural work and caring for animals. (Centre for Science and Environment, 1985 pg.172).

Several studies have indicated the time, effort and energy women spend on these important subsistence tasks. In Pura, a village in Karnataka to gather 1.74 tonnes of firewood every year, each firewood gathering household spends an average of 2.51 hours daily, making 172 trips in a year and each round trip is about 8.54 kilometres. (Centre for Science and Environment, 1985, pg.173).

A study carried out on the health of pregnant women in two villages in western Uttar Pradesh shows that women spend long hours in animal husbandry and making dung cakes. For instance, one pregnant woman spent a 14 hour working day, in which three hours were spent on animal husbandary and half an hour on making cowdung cakes. In addition, this woman spent three hours on fetching water, 2.5 hours on cooking and five hours on other household chores, including milling grain. (Centre for Science and Environment, 1985, pg.173).

Women's work in the hills and deserts is even harder. Agricultural production in these areas is extremely limited and alternatives to fuelwood like cowdung and crop wastes are also limited. Available studies clearly show that women put in an inhuman amount of time in the hills and deserts just searching for fuel and fodder.

In a study of two Himalayan villages, Pakhi and Dwing in Chamoli district, Uttar Pradesh, in 75 and 86.3 per cent of the households, respectively, only women went out to collect fire wood. In Dwing, women have to walk at least five kilometers on a steep uphill climb. It takes them anything from 6 to 10 hours. On an average, 7.2 hours are spent in making one trip to the forest to collect wood. On each trip, an average of 25 kilos of wood is carried as a bundle on the back. For many women this is a daily chore.

In many a household, women spend eight hours just to collect firewood. When what is considered a normal working day all over the world ends, these women have only accomplished the first of their day's tasks. (Swaminathan, 1984, pg.12).

In these two villages, the women have to do these, in addition to all the other household chores, as well as agriculture, as most of the adult male population is migrant. Thus "the predominantly agricultural economy is run mainly on the strength of the women. The cropping pattern involves three crops a year", (Swaminathan, 1984), which means three times more work for women. The cattle population is also very high in these hills with an average of 4.7 cattle per family in Pakhi, an additional task of the women.



A study in the Chamba Block of Tehri district in the Himalayas, has revealed that a woman on an average convers 5,460 km. a year in the process of gathering firewood. (Debnath, 1987), Collection of firewood, fodder and water are considered to be one of the most back-breaking of tasks. (Swaminathan, 1984).

A study conducted by the Operations Research Group in Western Uttar Pradesh indicated that the pregnant women did not use health services, because they were so overloaded with work, that they did not have the time to seek health facilities. One woman said that even till the day she delivered, she was working and three days after the delivery, she was back to collect fuel and fodder. (Agarwal, 1984).

### Water Carrying

Water carrying is another extremely strenuous activity undertaken by women and it consumes an enormous amount of their time. Available information indicates that women spend long hours and traverse long distances, especially in hilly areas and in the arid and semi-arid parts of the country. In the deltaic plains, the time taken may be less than an hour a day. But this varies: in villages of Karnataka, a study shows this can be from one to 1-4 hours per household a day, whereas in villages of eastern Uttar Pradesh it can be as much as 3.9 hours a day on an average (Centre for Science and Environment, 1985, pg.175).

According to a study of the effect of water-carrying on women's health, carrying less water at a time, walking

longer distances, the women experience intense pain in different parts of their bodies, particularly the legs, waist, hip bones and shoulders. According to medical opinion, continued lifting of pots will lead to a prolapsed uterus. (Prabha Rani, 1983).

There are other tasks which women do and contribute further to the family's subsistence - growing vegetables on small plots of land around the house, which are either bartered or sold and raising poultry or small animals, which is usually the women's responsibility. In times of drought or scarcity, most of the work of women increases with respect to getting water, fodder, fuel. In the recent drought, the entire burden of women increased many-fold. In rural Gujarat women wake up at 3.00 a.m. to start their search for fodder and come back at 1.30 p.m. Thus 10½ hours were spent only on fetching fodder, besides the time spent on fetching water. One can only imagine the effects of these strains and stresses on already malnourished bodies. They went to bed for fewer and fewer hours every night. (Health Task Force, Workshop Report, 1987).

Besides, women have to scavenge over the countryside for whatever is available, roots or wild plants, leaves and other parts of certain trees, and certain kinds of grass which are edible. This is often a key factor in determining whether or not the family survives these crises. (Kishwar and Vanita, 1984, pg.3).

Processing of food, cooking over smoky chulhas, washing clothes and utensils in all sorts of weather, the upkeep of the dwelling place including plastering and



mending the house, all these and many more are clearly delineated as "women's tasks". Despite their stretching themselves and overworking, they have very little control over the conditions and products of their labour.

Several studies have clearly shown that women in agricultural communities overwork and are the main pillars of agricultural production. A study of labour in both homes and fields in Haryana revealed that the average working day for women was between 15½ to 16 hours (Voluntary Health Association of India, 1987).

A three-year field study, conducted in some villages of Karnataka, with the aim of discovering rural energy consumption patterns, showed that the labour of women and children together contributes almost 70 per cent of total human energy spent in doing all the work in villages. Most of this energy was spent not on income-generating activities but on survival tasks -- gathering firewood, fetching water, and cooking. This particular survey did not take into account other domestic work such as sweeping, washing clothes, cleaning utensils, and child-care, even though these tasks too consume a great deal of energy. Most of women's energy is expended on daily life-supporting tasks, which have to be performed regardless of the season. In comparison, men perform more seasonal types of energy-expending jobs, such as ploughing which usually takes place at only two periods in the year, and in some areas only one. (Kishwar and Vanita, 1984, pg.4).

In Madhya Pradesh, women aged 10 to 70 went to work in the fields. They work there for 8 to 10 hours in

similar conditions and in similar activities. In spite of it, the women felt that the men, who plough the land, work harder and, hence, deserve more food and pay. (Saxena, 1987).

Thus, despite the heavy workload of women in agriculture, they are not even elevated to the level of 'producer'. Instead of recognising women's labour and contribution in the household and outside, their labour on the land too, is marginalised, as their "agricultural activity is also seen as part of their domestic chores. Many languages lack the feminine gender for the word 'farmer' as indeed for so many professions. Women's labour in the field of agriculture as elsewhere, remains almost invisible". (Poornima, R., 1985, pg. 14).

### Health

The excessive work-load, including long hours of work, poor nutrition due to low wages, excessive fertility due to high infant mortality, all result in poor conditions of health of women in the agricultural sector.

The landless Harijan agricultural women workers in a Punjab village, reported about their health problems as follows:

Our life is full of misery, it is difficult to keep count of our sorrows. We are slaves to each moment. From ~~dawn~~ to dusk, we never get to put down the ramba and dati. (agricultural tools).

As soon as we get done with collecting fodder for the cattle, we start off to fetch firewood.



We are up at day break, and we don't get to see our beds until late in the night. We are on our feet all day (she touched the muscles of her calf) and by evening these are aching. Don't forget to write about these aches (then she put her hand on her hips). This too hurts me all the time - aches, pains, we have plenty of them - ask as much as you like about them. (Manushi, 1980, pg. 18-19).

Almost all the studies dealing with agricultural labour have indicated that though it is generally thought that the man is responsible for farm work assisted by the woman, in most cases, it is the woman who does the farm work assisted by the man. (Behal, 1985, pg. 28; Debnath, 1987).

As opposed to the overwork of women agricultural workers, their intake of food is very low and inadequate. Women in many rural societies eat less of the food they need, than do men. When food is scarce, such as just before harvest, the workload of women increases without a corresponding increase in food. As food scarcity increases, so does the disparity in nutrition between the sexes. (Food and Agricultural Organisation, 1981).

The final computation of calorie expenditure on various agricultural and domestic activities by men and women was found to be: 2473 calories per day per man and 2505 calories per day per woman. In contrast, the estimated intake of calories was 3270 per day per man, and 2410 calories per day per woman. Thus women faced not only a relative deprivation in comparison with men, but also an absolute deficit vis-a-vis their calorie expenditure. (Batliwala, undated, pg. 23).

A few of the effects of this have been documented in a relatively prosperous village in Punjab, where 1) Men weigh 8.4 kilogrammes more than the women do; 2) Jat women weigh about as much as male agricultural labourers; 3) Though Jat women weigh over 6 kilogrammes more than agricultural labourer women, their height is approximately the same; 4) Jat men weigh approximately 10 kgs. more than agricultural labourer men; 5) Women are smaller by 11 centimeters compared to men. (Horowitz and Kishwar; 1982,pg.9).

The caloric deficit suffered by women is not marginal or seasonal but substantial and perennial, anything from 500 to 1,000 calories per day. (Batliwala, undated). These have very serious implications on their health. Some of these are: women have no energy reserves for emergencies such as illness etc., so that their mortality rates are higher in the event of an epidemic. (Shatrugna, undated). "It is also possible that their cells are converting food into usable energy more efficiently. This could result in early wearing out of cells, early ageing...."(Shatrugna, undated, pg.7).

### Hazards

There are other numerous hazards associated with farming and one among these is the exposure of human beings and animals to heavy concentration of air-borne dust. The atmosphere around agricultural farms is continuously polluted by particulate matter.

Particulate matter may be divided into three main classes: namely, dust, smoke and haze. Dust consists of various sized solid particles



of sand, gold, salt, gunpowder and incense, formed by disintegration processes. Smoke is a suspension of fine liquid or solid particles produced by burning and condensation. Haze consists of liquid atomization. Grain dust comprises solid particles that become air-borne during harvesting, threshing and grain handling. It has inorganic and organic materials such as silica and spores of bacteria, fungi, pollen, cells of algae, and appendages of insects, respectively.

The evolution of a dust cloud depends on the characteristics of dust, type of grain and method of handling. Agricultural practices have upset the ecological balance causing major changes in the ecosystem and biosphere. (PTI Science Service, 1985).

Handling of fodder, straw, cereals and industrial crops, results in the release of large quantities of vegetable dust which may cause:

Pneumoconiosis, mycosis, irritation of the respiratory system or respiratory and cutaneous allergies. This danger exists practically everywhere, but is probably greatest during mechanised work where the dust concentrations are particularly high, if no technical control measures are taken or they are insufficient. Finally, in areas where crops require irrigation and watering, working in water can bring about excessive chilling, resulting in respiratory tract infections and skin irritation; in certain regions where stagnant or slowly flowing water is used, helminthiasis may be contracted.

Similarly, schistosomiasis is most often contracted after contact with water, infested by snails in swamps or grass where they are prevalent, and ankylostomiasis is common where human faeces are used as a fertiliser. Stagnant waters can also be breeding places for insect vectors of infectious diseases. (International Labour Organisation, 1983).

Paddy husk is found to be a potent irritant and studies have shown a high incidence of irritating cough among rice mill workers. Over 66 per cent of them had eye irritations and pruritus (itchy skin); about 50 per cent suffered from nasal catarrh (sneezing and running nose), one-third had rashes and 27 per cent suffered from tightness of chest. Besides, X-rays have shown 15 per cent of the workers had chest opacities (streaky white patches) in the lower mid-zone of their lungs. (Sahabat Alam Malaysia, 1985).

According to Dr.Lim Heng Huat of the University of Malaya, paddy husk causes an infection known medically as paddy keratitis or paddy eye. Under this condition, farmers suffer from eye infections,generally thought to be caused by a virus. (Deccan Herald, 1984).

### Accidents

The main hazards from agricultural implements have been noted by the ILO as follows:

- a) Physical injuries from the cutting edges of implements such as sickles and machetes. As first-aid facilities are often non-existent, or very poor, and medical attention may not be available, there is the risk of small injuries becoming serious and there is also the danger of tetanus. Working barefooted, and without hand and arm protection, with implements such as machetes, increases the accident risk.
- b) The cumulative ill effects to the health of the worker, over a period of time, owing to the handling



of heavy and poorly designed implements, especially in **extreme** climatic conditions. (ILO, 1983, pg.72).

It has been officially estimated that every year, during the wheat harvesting season, about 1,000 farm labourers (or farmers ) become victims of thresher accidents. Sugarcane crushing and cotton ginning also result in frequent accidents. (Dogra, 1982). By the year 1983 , 10,000 farm workers had been incapacitated by power threshers. (Batra, 1983).

### Chemical hazards

An increasing source of ill-health for the majority of the agricultural workers, including women, is the extensive application of chemical techniques of the solution of agricultural problems.

To counter the action of plant pests, that would otherwise reduce the yield from agricultural effort, chemical manufacturers specialising in pesticide production have been synthesising new substances of great chemical complexity and biological potency. So great has been the effect of this activity that the economic well-being of many agricultural countries now depends on the higher yields obtained by the use of these pesticides. Equally effective in many respects have been the synthesis and use of chemical fertilisers, the most advanced applications of which originate from the results of soil research by chemical means.. There are many other aspects of agricultural activity in which chemicals play a part (nutritional, pathological, biological), but those associated with the use of pesticides and fertilisers, are the most significant in terms of the

tonnage quantities involved and the hazards associated with these substances in the farms or plantations where they are used. Many of the pesticides are toxic. (Akhouri and Sinha, 1983, pg.178).

According to WHO estimates, India accounts for about a third or more of all cases (500,000 cases every year) of pesticides' poisoning in the underdeveloped countries. Seventy per cent of the total agrochemicals used in India are either banned (or their use severely restricted) in the developed countries. (Parikh, 1985).

In a study commissioned by the Health Task Force in a village in Madhya Pradesh, 62.9 per cent of the women engaged in the operation of sowing experienced symptoms attributable to the fertilizer powder mixed with the seeds. They complained of burning sensation in the hands, irritation of the upper respiratory tract, and sweating of the palms. No protective equipments or methods were used apart from a thin cloth around the lower part of their face. (Saxena, 1987).

In Gujarat, "illiterate backward class members are hired for applying pesticides and a survey of two civil hospitals showed that the deaths due to pesticides poisoning had risen from 13 in 1976 to 40 in 1980. This of course does not include those cases that could not even have made it to a hospital". (Bidwai, 1982).

The sprayers wear no protectives as they are too inconvenient for the intensive work schedule allotted to them; often no protective equipment is made available. The sprayers experience persistent digestive and respiratory



disorders - nausea, vomiting, diarrhoea, headaches and cough. In most cases, the labourers are not ignorant, but misinformed. (Parikh, 1985).

The organophosphorus insecticide (Chlorthion, DDVP, Demeton, Diazinon, Guthion, Malathion, Methyl parathion, Phorate, Phosphomidon Phosdrin, Schradan, TEPP and Trichlorophon), whatever may be the route of absorption, the systemic effects due to these chemicals are usually the same. The early symptoms may be any combination of headache, giddiness, vertigo, nausea, vomiting, abdominal cramps, diarrhoea, blurred vision, muscular twitching, convulsions, loss of reflexes, loss of sphincter control, coma and, ultimately, death may result by respiratory arrest.

The halogenated hydrocarbon insecticide (Aldrin, Lindane, Chlordane, DDT, Dieldrin, Endrin, Heptachlor, Thiodan, Toxaphene) vary widely in their chemical structure and toxicity. The pharmacologic action of these compounds is stimulation of the central nervous system. This group of compounds is highly soluble in oily solution and organic solvents. Absorption can also take place through ingestion and inhalation. The manifestation of acute poisoning, due to these insecticides, usually results within half to two hours after oral ingestion. It results into paraesthesia of the extremities followed by malaise, headache, vomiting, disturbance of equilibrium, dizziness or confusion. Death may occur from respiratory arrest during coma; at times jaundice may develop.

Different chemical ingredients of pesticides cause different types of poisoning. The Table 2.3 indicates the nature of poisoning from a variety of pesticides used in India. A close look at the table indicates that the poisoning, resulting out of the pesticides, is both of temporary and permanent nature. It may cause temporary upset or instantaneous death or

Table 2.3  
PESTICIDES AND THEIR NATURE OF POISONING

No.	Name of Pesticide	Nature of Poisoning
1.	Arsenic Compounds	Systemic; severe gastrointestinal symptoms in acute stage.
2.	Barium Compounds	Systemic; tightness of muscles, convulsions and respiratory failure.
3.	Carbamates	Systemic; local effects on eyes and respiratory mucosa.
4.	Chlorophenoxy Compounds	Systemic; hepatic porphyria and cardiac irregularities.
5.	Copper Compounds	Systemic; gastro-intestinal and renal manifestations.
6.	Dinitrophenols	Systemic; hyperpyrexia, yellow staining of skin and conjunctive.
7.	Ethylene Dibromide	Systemic; skin blisters and respiratory symptoms.
8.	Halogenated hydrocarbons (Aldrin, BHC, Lindane, Chlordane, DDT, Dieldrin, Endrin, Heptachlor, Toxaphene, etc.)	Systemic; hyperexcitability of nervous system, paraesthesia, incoordination convulsions, tremors, etc.
9.	Lime Sulphur	Systemic; respiratory symptoms.
10.	Mercury Compounds	Systemic; Initial fever, dermatitis and neurological manifestations.
11.	Methyl Bromide	Systemic; irritation of skin.
12.	Nicotine	Systemic; marked neurological manifestations.
13.	Organophosphorus Insecticides (Chlorpyrifos, DDVP, Demeton, Diazinon, Guthion, Malathion, Methyl Parathion, Phorate, Phosphomidon, Phemdrin and Theodan, Trichlorophen etc.)	Systemic; signs and symptoms of marked parasym-pathomimetic stimulation, depression of blood cholinesterase enzyme is diagnostic.
14.	Pentachlorophenol	Systemic; marked rise in body temperature.
15.	Phosphorus Compounds	Systemic; gastro-intestinal irritation in acute phase; haemorrhagic manifestations and jaundice.
16.	Pyrethrum	Allergic manifestations & anaphylactic shock etc. Skin dermatitis.
17.	Sodium Fluoroacetate	Systemic; early symptoms are apprehension and convulsions.
18.	Thallium	Systemic; cast re-intestinal and neurological symptoms.
19.	Warfarin	Haemorrhagic manifestation.



a long-term neurotoxicity which may not kill but damage some important system of the body destroying the capacity to concentrate on work. (Akhoury and Sinha, 1983, pg.179).

The union field workers in Arizona, USA, have experienced "getting sick and vomiting while working because of the chemicals in the irrigation water and the pesticides on the crops. The farm-worker women were especially concerned about the long-term effects on their children who accompany them to the fields. (New Women's Times, 1980).

The first tragic report of poisoning due to pesticide was reported from the southernmost State of Kerala in 1959 when 100 people died after eating wheat flour contaminated with parathion. In 1964, 3 farmers and a woman were found dead in village Kottapura in Punjab. The death resulted while they were engaged in spraying operation on cotton using endrin. Besides these, several others were also found unconscious during the period in the same village. A survey of the well waters of Delhi villages showed that, in certain wells, the nitrate, nitrogen was as high as 400 ppm. which is considerably above the WHO limit of 10 ppm. Phosphate and superphosphate, another very commonly used fertilizer in India may contain 10 per cent dust of free silica. Prolonged inhalation of these substances may cause silicosis. (Akhoury and Sinha, 1983). These incidents are only the tip of the ice-berg.

Table 2.4 indicates the extent of poisoning cases in different states/union territories of India in the year 1978, which is considered to be a representative year among the 13 to 14 years studied. (Akhoury and Sinha, 1983).

Table 2.4

HUMAN POISONING CASES DUE TO PESTICIDES IN SOME STATES AND  
UNION TERRITORIES OF INDIA FOR THE YEAR 1978

Name of States/ Union Territories	Total No. of cases suspected poisoning	Total No. of positive cases	Percentage of positive cases established due to insecticide poison- ing
Bengal	2038	609	72.41
Bihar	776	69	55.07
Karnataka	849	527	69.9
Tamil Nadu	2814	1604	50.31
Andhra Pradesh	2024	846	60.99
Maharashtra	7851	1777	33.00
Punjab, Haryana, Himachal Pradesh and Chandigarh	738	487	30.18
Uttar Pradesh	2023	1040	10.19
Delhi	465	59	8.4

(Source: Akhouri and Sinha, 1983, pg.184).

The health problems of the women agricultural workers at Panagar in Madhya Pradesh, as related to the National Commission, were body pain, backaches and skin infections due to working in water which is polluted with fertilizers.

There have also been instances and studies which have proved the presence of BHC (Benzene hexachloride), a widely used pesticide in an overriding proportion of cow's



milk as well as breast milk. (Linear, 1986). In Coimbatore it was found that 70 per cent of the breast milk samples studied, contained BHC and 29 per cent contained hepta chlor. Similarly dieldrin, a powerful pesticide, chemically related to DDT, has also been detected in breast milk, the only nutrition for infants and children in most of the rural areas. (Hindu, 1985).

Pesticides, herbicides and organic solvents are also known to seriously affect the reproductive functions and organs in women, some of which are indicated below:

Dioxanes	Abortion, birth defects, still birth.
Poly chlorinated biphenyls.	Retarded growth, natural depression.
Pesticides	Birth defects, mutation, neural alterations, ovarian dysfunction, abortion.
Herbicides	Still birth, birth defects, menstrual dysfunction, anaemia.

(Source: Department of Science and Technology, 1984, pg.20).

Besides, there are specific health problems of the women agricultural workers related to their work, including those related to the particular work-process and the postures they have to work in, for specific operations. According to the studies by the ILO, manual planting and sowing involve uncomfortable postures: the working methods and implements are often a legacy of the past or products of local traditions or conditions. In general, neither the

tools nor the methods are rational from the ergonomic viewpoint; forks and hoes with short handles entail working in a bent or crouching posture, whereas, longer handles would render work much easier. Scything by hand, carried out in a bent position, requires a great deal of energy (5,500 - 6,400 kcal per day), though it can be made easier by increasing the angle between the blade and the handle. (ILO 1983, pg.77).

An analysis of death information of an agricultural community in Maharashtra, for the years 1982 (Batliwal, 1983) and 1983 (Daswani, 1984) revealed a pattern of seasonal mortality among children and infants. There was a very strong clustering of child deaths in the months July-August, when 37 per cent of all the deaths of infants had occurred. The trend was even stronger in the 0-1 age group. No skewed distribution in the number of deliveries was noted. A majority of these were 0-1 year deaths, i.e., neo-natal deaths, between 0-4 weeks. An even larger number were between 0-7 days (Batliwala, 1983). A similar pattern, but less sharp was observed in the year 1983. (Daswani, 1984).

A possible reason for this intriguing pattern was the type of work women did during these specific months. This was a rice-growing area and during the months of July and August, which was when the cluster had occurred, were the months of the transplanting operation. This is the time of the year when there is maximum employment in the villages, especially for women.

During transplanting operations, women have to work in the squatting position for upto 12 hours a day. There



seems a close correlation between that position, the pressure on the uterus and early delivery. The excessive strain and pressure on the uterus could well have resulted in premature birthing and high risks to the mother. (Batliwala, 1983). And since there is no evidence that women receive the required increase in nutrition during pregnancy, the foetus at seven or eight months, is too underweight to survive.

Such birth attrition would aggravate, or rather accelerate, the vicious circle of poor nutritional status of women - high fertility - high infant mortality - further depleted health status of women (Batliwala, undated, pg.33).

In Finland, in a study using hospital discharge records, out of the six occupations of women with above-average rates of spontaneous abortion, agriculture was listed as one of them. (World Health Organisation, 1986, pg.25).

In the states of Jammu and Kashmir, while going from Srinagar to Achabal, the National Commission on Self-Employed Women (and women in the informal sector), noticed that in the paddy fields, the women were doing the transplanting work the whole day, and were doing it in a continuously bent position, while the men were sitting on small stools and doing the same work. The women agricultural workers told the Commission that, as a result of continuously working in the field and in that particular posture, the women develop backaches. Aside from arguing that women preferred the traditional method, the men could not explain why the women did not use the stools. It was equally difficult to obtain an explanation from the women.

It would seem possible to popularise folding wooden stools, easy to carry, even home-made and portable.

Hand lacerations were also mentioned to the Commission. Irritation on the hands and feet, due to the use of chemical fertilisers, were mentioned by the women as far apart as Kashmir and Orissa. It may be necessary, therefore, to compel fertiliser companies to place a pair of polythene gloves and goloshes in each bag of fertiliser. The material should be soft and flexible to allow the finer movements of the fingers, and non-sweaty, to prevent itch. Fungal infections, due to stagnant polluted water, were also common. Hence, popularising polythene covers would be a possible solution.

In the state of Madhya Pradesh, in the operation of sowing, the women have to carry a metal vessel containing seed grain mixed with fertiliser powder. The vessel weighs 3 to 4 kgs., and is suspended by straps from their shoulders, the vessel resting against their abdomen. Women experience great difficulty due to the heavy load, the long distances, and the posture (arm) required for sowing the seeds. For weeding, the women assume a sitting posture and inch forward slowly and they pull out the grass or cut the bigger plants. They have to speed up as the monsoon sets in and drenches them. In the hurry, the sickle, or the hand holding the grass, slips and serious injuries result. Feet, unprotected as they have to be to work in the field conditions, are often exposed to thorn pricks which easily get infected; more common however, is the biting of the muck, an itch developing in between the toes probably due to fungal infections. On an average, women work for 13 to 15



days on the weeding operation, often in the hot sun or monsoon. More than 36 per cent of the women workers in a Madhya Pradesh village complained about problems concerning the time and weather, while 43 per cent considered it an effort by itself as well as the odd posture, giving rise to backache and leg pain. (Saxena, 1987).

Harvesting involved a great expenditure of energy. This was especially true of the soyabean crop. Due to the danger of the bean splitting as it ripens, and dispersing the grain, speed in cutting during harvesting was a very important factor. Thus women had to leave earlier, come back later and could rest only for a very short period. Also in the actual cutting of the crop, the shell of the bean, curved and pointed at the free end, pokes into the palm of the workers.

The posture during the harvesting operation causes great strain on the muscles of the back and legs. The women have to sit and move as in weeding, but greater speed has to be used with both the arms and the legs. (Saxena, 1987).

According to the report of the Department of Science and Technology, (DST) women are employed in large numbers in the operations of cotton picking and pod opening. Women have to work in the open at high temperatures. The continuous opening of pods causes bleeding of the fingers. (DST, 1983).

On one of the mulberry farms owned by the Madhya Pradesh Government, the women worked instead of the men, because the wage paid was lower than in the private farms.

They worked a whole day in the blazing sun, without even drinking water facilities, which they urged from the management, but did not get. There was no shelter, where they could eat their noon-day meals, in spite of repeated requests. There was no creche facility. If the Government itself cannot be a role model, it is questionable how far it can put pressure on the private landlords to provide the necessary facilities. In fact, private employment was favoured, even when wages were the same, as they were given a free noon-day meal.

### Pregnancy and Delivery

One of the most significant indicators of the health status of women, especially poor rural women in this country, is the declining proportion of women. Various researches, including the Committee on the Status of Women in India, 1974 and the Ministry of Agriculture, 1980 have argued that this decline needs to be interpreted in the light of women's declining economic status, resulting from loss of their traditional position in the economy and not merely as the result of the persistence or reproduction of the archaic social attitudes or the growing population pressure. Such observations are mainly based on the analysis of the situation of rural women. (Ministry of Agriculture, 1980, pg.29).

Recent attempts to explain the sex ratio trends focus on (a) differentials in mortality rates of males and females, both in infancy and in the older age-groups; (b) poor environmental conditions, especially water supply,



housing and sanitation; (c) inadequate health services for mothers and children, particularly in rural areas; (d) repeated pregnancies and malnutrition resulting in high maternal mortality; and (e) excessive burden of work and poverty. (Ministry of Agriculture, 1980, pg.30). With the increasing improvement in health services, the gap between male and female life expectancy had been increasing. In all age-groups up to the age of 40, women died in larger numbers than men. (Voluntary Health Association of India, 1987).

Lack of access of girls and women to education, training, and employment, reinforces the cultural norms that particularly affect women's health - the early age at marriage, the value attached to male children with consequent pressure on fertility, the tremendous psychological and social burden on women if they cannot play these roles.

The infant mortality rate in India is amongst the highest in the world. Every year 1,500,000 children in this country under 5 years, die of diarrhoea. Another 280,000 every year die of neonatal tetanus. (Manushi, 1987).

The tragedy of the high child mortality rate that haunts these oppressed families results in a much heavier burden of child-bearing for the women, because if it is expected that several children will die in their early years, then women must bear many more in order to ensure that at least a couple of them survive. The frequent illnesses of children and adults also add enormously to the women's family responsibilities; she, herself, is frequently ill but cannot get the necessary health care.

The maternal mortality rate in India is also among the highest in the world, especially in the rural areas. Pregnant women, often up to the moment of childbirth, are forced to keep working, because survival tasks have to be carried on without a day's break. (Kishwar and Vanita, 1984, pg.2).

The high maternal mortality, especially in rural areas, is associated with pregnancy wastage among malnourished mothers, pre-natal mortality and still births, resulting in further maternal malnutrition and repeated pregnancies. All these indicators point to inadequate maternity and child health services. While there is a distinct rise in the rate of maternal deaths from all causes between 1971 and 1972 (from 37.6 per cent in 1971 to 41.8 per cent in 1972), the maximum increases are in cases of abortion and injuries during delivery.

Table 2.5

MATERNAL DEATH RATE PER 100,000 LIVE BIRTHS FOR INDIA  
1970 to 1972

Causes	1970	1971	1972
1. Abortion	21.4	14.7	56.2
2. Eclampsia	34.6	40.4	46.2
3. Placenta Praevia	24.7	22.0	30.1
4. Haemorrhage in delivery	33.0	18.4	30.1
5. Post-partum Haemorrhage	74.2	51.4	36.1
6. Anaemia of Pregnancy	62.6	69.8	50.2
7. Abnormal Presentation	18.1	22.0	28.1
8. Puerperal Sepsis	59.4	40.4	56.2
9. Not classifiable as Above	61.0	97.3	84.3
All Causes	389.1	376.3	417.6

(Source: Model Registration Scheme - Survey of Causes of Death 1972, Registrar General of India, Quoted in Shatrugna, Veena, Women and Health, undated, pg.12).



Five women die in the process of child bearing every year in a population of about 30,000(1,000 births). Almost all these are needless deaths considering that the rate in developed countries, and even in cities like Bombay is less than 0.1 per thousand. No wonder our Female to Male ratio is a mere 934:1,000(1981 Census) and expectation of life for women (49 in 1975) is less than men (51 in 1975).

The number of women who die as a result of pregnancy and child birth indicates the level of care that they receive before as well as during this period. According to a study, by the World Health Organisation, the figures are 545 (for urban Anantapur) and 874 (for rural Anantapur) per 100,000 live births. (World Health Organisation, 1986). The figure for India as a whole is 417.6 per 100,000 live births, one of the highest in the world. Our neighbouring countries have as low a figure as 15 to 20. In spite of subsidised Government health care systems, and numerous programmes for women, very few women appear to benefit from the services. The main causes of maternal mortality continue to be anaemia, septic abortions, severe bleeding, eclampsia and the non-availability of and non-access to health care services.

A recent analysis has revealed that, eighty percent of deliveries continue to take place at home in the hands of traditional dais, or an elder in the family. Women in the remote corners of the country are not informed of the need to detect problems early and obtain hospital care. The problem is the delay in referral due to late diagnosis, long distances, and lack of communication facilities.

(Shatrugna, undated, pg.11). These factors are associated with the skewed distribution of health facilities in the country, in the rural vis-a-vis the urban areas.

In Bhiladi, Madhya Pradesh, girls were married off at the age of 9 or 10 years. Seventy-nine per cent of the ever-married population were married before the age of maturity. The average number of pregnancies was 5 to 6 per woman, of which, 5.05 terminated in a full-term live child, but finally only 3.72 survived. Thus, only 65 per cent of the pregnancies resulted in a healthy child, while as high a proportion as 35 per cent was lost in infancy, from childhood infections and other ailments. (Saxena, 1987).

About their deliveries the women agricultural workers in Punjab said:

We don't even get three days. Three days would be enough. In the afternoon we finish work in the fields and in the evening....(Another) In the evening we bring in a bundle of fodder and after two hours the child is born. (They counted many such cases on their fingertips).

When you have to choose between starvation and work, then you automatically find the strength to work. Have our fathers left us bundles of notes to spend, as we please? With all this work we just manage to survive.

The third day after this little girl was born, I made my own tea and cooked my own food. My husband was getting ready to go to work. I asked him to make me a cup of tea and he pretended not to hear, just mumbled something and went off. I had either to starve or start work. (Others continued) After four days or so, we start doing all the work. Who would allow us



more rest than that ? (Another) That's exactly what happened to me. After three days I started work. Now this wretched backache just doesn't leave me. I have told him so many times to get me some medicine, but he just ignores me. Well, only if he has the money and can forego a day's earnings, can he go all the way and get medicine. (older woman). My whole body is decaying, bhai. My joints keep aching.

When asked about nourishing food after delivering a child or during pregnancy, one woman said:

When a boy was born, he brought me 250 grams of ghee, this time it was a girl so I hardly got a dry roti. (Another) Bhai, what world are you talking of? We are lucky if we get four meals of half-baked wheat. Now, don't you forget to write about this half-baked wheat. (After this I did not dare ask about the fruit and vitamins generally prescribed by doctors for pregnant women.). (Manushi, 1980, pg.24).

The National Commission members were also told by the agricultural workers that they worked in the fields till their delivery, as they could not forego the wage. Most of them reported that they returned to agricultural work immediately after 40 days, although in some places they reported 3 months and in some places, much less.

### Mental Health of Women Agricultural Workers

A feeling of well-being, of being in control of one's body and life, are important aspects of person's mental and hence over-all health status. In the agricultural sector, women, especially poor, labouring women, experience a continuous onslaught on their mental well-

being and health insecurity of the next day's meal, lack of access to one's own land, drunkenness and battering from their husbands, rape and humiliation from high-caste or landowners, sexual exploitation from State authorities, excommunication from the community, witch-hunting, are some of the very serious factors that affect mental and emotional well-being of women agricultural workers.

The daily uncertainty about the next meal produces its own crop of nervous disorders amongst the women producing food. It is the women who have to feed the children and experience their anguish if there is no food in the house. In a village, Sukhomajri in Haryana, it was found that several women were regular consumers of tranquilisers. Some were actually addicted to them, without being aware of it. (Sarin, 1986, pg.30).

Besides, poor women in the rural areas are powerless and vulnerable vis-a-vis the political as well as the economic and social authorities in their milieu. Aside from the social repercussions of their situation of powerlessness, is their continuous feeling of inability to take control of their lives. One aspect of this feeling of powerlessness and helplessness, is the lack of control of the women over land or any means of production. As elsewhere, even in the rural community, who owns the land is an important issue, as the case-study of a woman in Madhopur village in South Gujarat brings out. Her livelihood was the piece of land belonging to her husband's family:



....which she cultivated for food, while he earned a small cash income. Her own family was landless, her sister was divorced and living in their natal home, so there was probably already pressure on living space. The poorer the family, the greater the problem is likely to be. The consequence is that a woman from a land poor household will find it difficult to move back to her natal home and may be forced to stay with an unwilling or even a violent husband. (Clarke, 1985, pg.20).

Thus, while agricultural labourers do feel that the money they get is inadequate for their toil, which is the bitter truth, the women working on their husband's fields do not even have a right to complain about the wages they never receive.

It is women who suffer most from various habits such as drunkenness, that men take to, in order to get away from the harsh living and working conditions.

Labourers who earn Rs.15 to 20 a day spend Rs.8 to 10 on liquor. Many men do not share the household expenses at all but spend their entire wage on liquor. During the fruit season, most of the income from orchards is spent on liquor. Villagers who bring milk, vegetables, fruits, for sale in the town markets return home drunk, and do not contribute anything to running the house. It is said that the buckets which come full of milk in the morning return full of liquor at night. Having spent their cash income, many men begin selling, their property, wives' jewellery, clothes, utensils, even land. One woman in Ranikhet told us that her husband had sold 16 tolas of her gold merely for liquor.

The women say that nowadays, even children have taken to drink.

There are hundreds of homes where the children are hungry, there is no money for clothing or school fees, but the father wastes his entire income on liquor. Women do most of the agricultural and other work in these areas. They work in the fields, in the house, look after the animals, fetch the firewood and water. After all this labour, they have to bear the beatings of a drunken husband, father or brother. Many women live on their own. Drunken men try to harass these women.

When women go into the fields or forests to work, they feel insecure because of drunken men wandering around. (Bhatt, 1984, pg.2 & 3).

The sexual oppression and exploitation of women in the agricultural sector is epitomised in certain areas like in the Phulbani district in the state of Orissa. Here, there are entire villages on the hill-slopes which are termed the valleys of deserted wives and fatherless children. Government officials, contractors and traders from distant places come on work to Phulbani, settle there for sometime and acquire a tribal girl as a wife. Fathering a few children, these men invariably vanish, deserting the tribal girls and the children. In Ghumsar Udaygiri alone, the number of deserted wives is said to be 200 plus. (Banerjee, 1987).

In the North Arcot district of Tamil Nadu, the landlords preserve many social customs aimed at humiliating the Harijans.

For example, when landlords give food or water to the Harijans, they insist that it must be received in bare hands, not in a plate or cup. They do not allow Harijans to enter their homes



or to draw water from community wells. They feel insulted if a Harijan appears in any state but the most abject poverty. Any Harijan fortunate enough to own a bicycle must not ride it through the landlords' streets. If a Harijan man wear sandals or a shirt, he must remove them in the presence of a landlord, and stand barefoot and barechested. Harijans who dare defy these customs, or ask for their legal rights, are often beaten or have their homes burnt down. Harijan women are paid particularly low wages, only Rs.1.50 to Rs.2/- a day, and they are experiencing increasing difficulty in finding paid agricultural work, as mechanisation spreads. Harijan agricultural women labourers are often sexually exploited by landlords. (Burnad, 1983, pg.33).

In many parts of India, high caste landowners are known to take advantage of peasant girls who are forced through poverty to work for them.

Since the girls have to seek work from these men, they often cannot but accept unwelcome sexual advances as a necessary evil. In occasional cases, the husband may even be aware of the extramarital relationship. (Burnad, 1983,pg.33).

There are entire villages where the custom of "first night" with the politically powerful landowner was the norm till at least as late as the 1970s. (Gothoskar and Savara, 1982). Rape is a weapon commonly used by the State and other authorities like the military and police to victimise women workers who try to raise their voice.

May 1978: Agra. More than nine women were raped by landowners and the police. Many chamar women were kidnapped.

March 1978: Bihar. High caste villagers attached the dalit basti. Five women were raped by the landowners. (Sujata and Vijay, 1980,pg.4).

In one such incident in Singhbhum, there was a clash between demonstrating tribals and the Bihar military police in Gua, which was followed by atrocities on tribal women by the Bihar military police. Apart from the traumatic and brutal experience of rape, the women have to often suffer all their lives. As in the case of the Ho people in Singhbhum,

Women who are identified by the community as victims of rape by someone outside the tribe, automatically lose their economic, social and ritual rights. They are considered ritually impure - even water is not accepted from their hands or offered to them. If married, their husbands have the right to divorce them without providing for them. If unmarried, they lose their usufructory right over their parental property. They are usually forced to leave their home as well as their village. Often, the only means of survival most of them have left are begging, prostitution and migration to the cities where they end up as bonded labour in severely exploitative employment such as in the brick kilns. (Kishwar, 1982, pg.2).

The treatment for mental disorders is another source of severe trauma. Mental disorders are often perceived as resulting from supernatural phenomenon. In meetings with the Health Task Force, village activists from Dhule, Maharashtra, narrated the methods of torture--- beating, flogging and branding-- used by the local bhagats for "getting rid of the demon or ghost" which is supposed to have entered the body of the woman who in reality may be emotionally disturbed. There seems to be no way women can express their anguish, fear and anger, without serious repercussions.



### Women agricultural workers and health care facilities

The basis of health planning in India was the Report of the Health Survey and Development Committee (Bhore Committee, 1946) and the Health Survey and Planning Committee (Mudaliar Committee, 1961). Both the Bhore Committee and the Mudaliar Committee emphasised maternity and child health services in planning the structure of rural health. Resource constraints, and the lack of equal amenities in rural areas affected the development of rural health services adversely. Many studies have indicated the highly skewed distribution of public facilities and expenditure in favour of urban areas.

Population Rural Urban  
(in Crores) 52.5 16



Total Non-private Expenditure  
(in crores)

Rural  
393.75

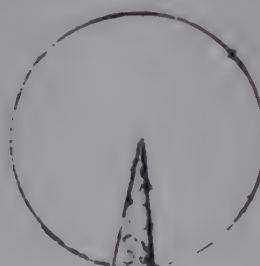
Urban  
6102.16



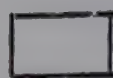
Per capita non-private  
expenditure (in rupees)

Rural  
7.5

Urban  
381.385



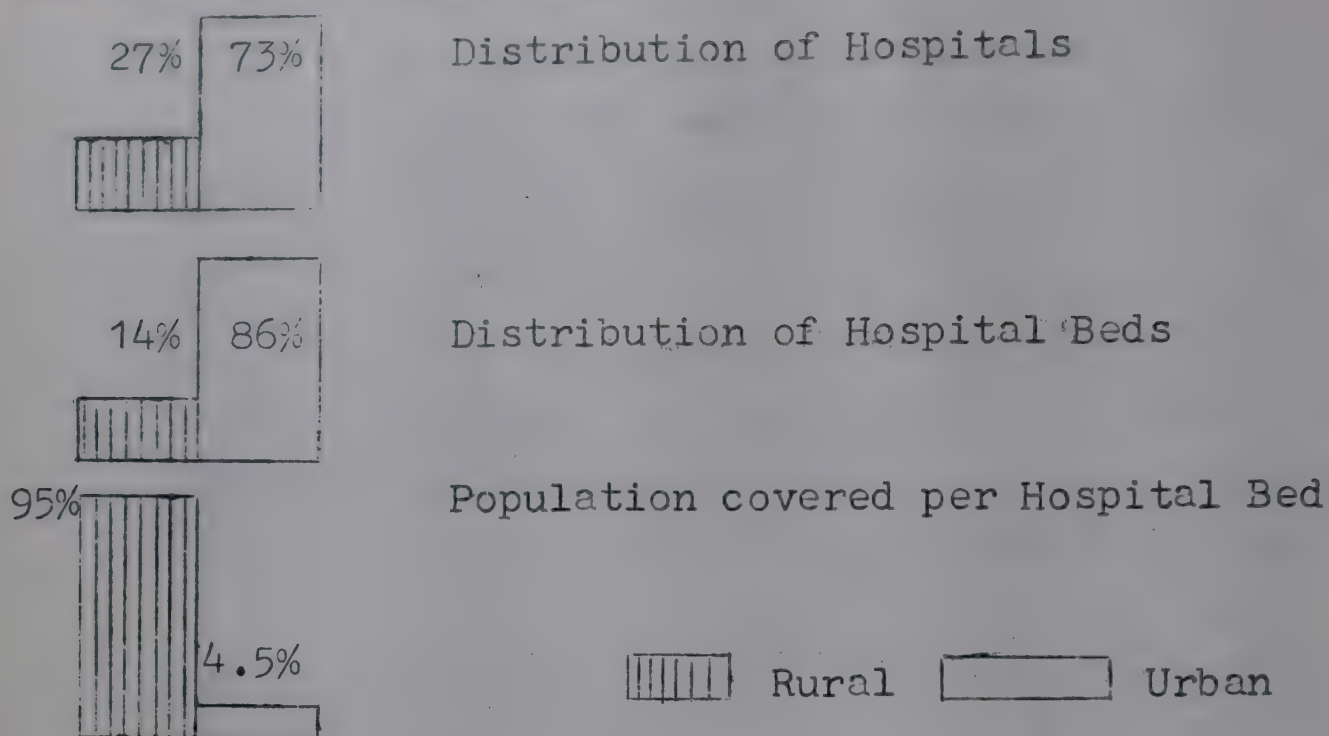
Rural



Urban

(Duggal, 1986, pg.4).

## Rural - Urban Disparities



(Duggal, 1986, pg.4).

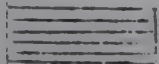
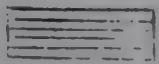
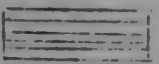
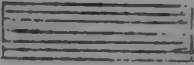



The problem was further complicated by the high priority accorded to the Family Planning Programme from the Third Five Year Plan onwards. While the PHCs continued with inadequate resources for general health services, new staff was provided for Family Planning Programme work exclusively. When the Family Planning Programme received added impetus in 1966 some of the states even transferred personnel from the general health services to the family planning sector. (Ministry of Agriculture, 1980).

The health services are characterised by a failure to provide even minimum health services to the majority of rural people, and a growing investment in expensive curative services in urban areas, particularly metropolitan centres. Despite the Srivastava Committee's (1973) new approach to health care, the maladies of the health services



continue. In fact, even in terms of the health outlays in the 5 years plans, there has been a systematic decline,

#### Health Outlays Under 5-Year Plans

7th Plan		1.9%
6th Plan		1.9%
5th Plan		1.9%
4th Plan		2.1%
3rd Plan		2.6%
2nd Plan		4.6%
1st Plan		5%

(Source: Compiled from Blitz, Independence Day Special 16th August 1986) (Duggal, 1986, pg.5)

The decline in health expenditure, the urban--rural disparities, the obsession of the Government with family planning, at the expense of health care facilities, and the marginal concern of society and the family for women's health, combine to keep even the minimal use of health services away from the women. This is especially true of poor, labouring women in the rural areas.

Research on health facilities and their use indicates that women go to hospitals and contact medical functionaries less often than men. Studies have also

clearly indicated that the amount of money spent by individuals and families for medical treatment is greater for men. (Murthy, 1980).

It has been argued that the very nature and structure of the health service system militates against its reaching women. Women have neither the time, mobility nor child care facilities to travel long distances to seek medical health. (Ghosh, 1987, pg.7). In a study conducted by the Operations Research Group in Western Uttar Pradesh, in which they interviewed pregnant women about why they did not use health services, it repeatedly came out that:

The women were so overloaded with work, in collecting the fuel and fodder and cooking and so on, that the women just did not have the time to seek health facilities. One woman said that even till the day she delivered, she was working and three days after the delivery, she was back to collecting fuel and fodder. There is just no way she had time to seek doctor's advice. (Agarwal, 1984, pg.10).

This is repeatedly confirmed by various studies on the use of primary health care centres. A study by the Indian Institute of Management, Ahmedabad,

showed that the number of men turning up at a PHC was five times more than the number of women. Women tend to shun seeking treatment even when they are ill and seek treatment when they become very ill, but by that time they are usually bed ridden. (Agarwal, 1984, pg.11).

The women agricultural workers in Himachal Pradesh told the National Commission on Self-Employed Women that



health services are at great distances from the majority of their villages. The poor rural women do not go to these hospitals/dispensaries for minor problems, and sometimes cannot even go to hospitals when they are seriously ill. Death-rate due to inaccessibility of health services is very high.

In the two villages, Malkhed and Bhatwadi, in the heart of Sangli - Satara region, a centre both of sugar-cane based cash crop agricultural development as well as of rural political power in Maharashtra, there were no direct medical services. The Bhatwadi women had some access to the two clinics and a small hospital in Wategaon, half a mile away. However, they had to spend a significant proportion of their income on the private medical services. In Malkhed, most minor and some major illnesses went untreated because of the difficulty in reaching health services. Very few women were attended to, by any doctor for childbirth, and of the vast majority who bore their children at home, most of them did not even consult a midwife. (Omvedt, 1981).

In a Madhya Pradesh village, women did not go to hospitals. The great distance and the expenses involved were major problems. Rs.40/- to Rs.45/- had to be spent per visit with 3 to 4 days of medicine. Thus, most deliveries also took place at home, with the help of a dai, if possible. However, the dai was a caste-related role. Only the Mehtar community women could become dais. There was only 1 dai in a population of 1000. The role of the dai was to cut the chord. Women had waited for as long as 4 hours to 1½ days with the child, placenta and chord,

for the dai to come. The ANM distributed medicines according to whether the women were going to have an operation for family planning. Women went to the mission hospital only for major problems such as tumours. (Saxena, 1987).

Among the women agricultural workers in a Punjab village, all had delivered at home, except one. They related their experiences: "Yes, one woman was taken, she had developed a complication. They took her to hospital all right but they had to borrow money from every single family. Many years have passed since, the child that was born is now working, but the dung basket she picked up then, to work and repay the loans, has yet to be put down. Poor thing, she still has to repay many people. Many god not send even one of our enemies to hospital". (Manushi, 1981, pg.24).

Many studies in rural Maharashtra have indicated that for even the more accessible villages, the nearest PHC is at a distance ranging from 8 kms. to 12 kms. by road. (Centre for Studies in Decentralised Industries, 1982, pg.88 ; 1984, pg.82). In the entire state of Maharashtra, one of the better states for health services, there here are only 1539 PHCs. On an average, there are 26,504 people per PHC and 2,79,000 people per each rural hospital ! (Jesani et al, 1985).

Inaccessibility of health care services, substandard and often downright negative treatment from the medical functionaries, the apathy of society towards women's health and her overworked and overburdened situation,



contribute to a situation, where the even the minimum of health services needed in emergencies, leave alone preventive care, is further divorced from the people who most need them - the vast, majority of women agricultural workers in the country.

### Plantations

The term plantation is widely used to denote large-scale agricultural units and the development of certain agricultural resources in accordance with the methods of industry. (International Labour Organisational, 1983 pg.1712).

### Work Process

The main activity on a plantation is the cultivation of one or two kinds of crops and involves the following types of work: soil preparation, planting, intercultivation, weeding, crop treatment, harvesting and transportation and storage of produce.

These operations entail the use of a variety of tools, machines and agricultural chemicals. Where virgin land is to be cultivated, it may be necessary to clear forest land by felling trees, uprooting stumps and burning off undergrowth, followed by ditch and irrigation channel digging.

In addition to the basic cultivation work, the following activities may also be carried out on a plantation; raising of livestock, processing of crop, maintenance and repair of buildings, plant, machinery, implements, roads and railway tracks. It may be necessary to generate electricity, dig wells, maintain irrigation trenches, operate engineering or woodworking shops and transport products to the market. (International Labour Organisation, 1983, pg.1712).

### Working Conditions

Heavy work-load, a universal condition at least as far as women workers in India are concerned, seems to be an important problem for women workers in tea, coffee, rubber, cardamon and cinchona plantations in this country. Over the years, this has been built into the entire recruitment policy in the plantations as 90 per cent of the women workers in the tea gardens in North and North-east areas and 84 per cent in the southern tea plantations, are employed on a piece-rate basis, according to a government report. (Ministry of Labour, Government of India, 1980). Thus, over-working, slave-driving themselves is the only way they can earn their minimal wages. Most of the women workers are employed in "unskilled" jobs and they do not have the opportunity, the means, the time and the mental space to educate or train themselves and there are no on-the-job training facilities for them either.

Despite the Equal Remuneration Act, 1976, differentials in wage rates of men and women still continue. In Assam, and Karnataka and also in the rubber plantations in Tamil Nadu and Kerala, the time wages of women field workers are observed to be lower than those of the corresponding men workers. Almost all the women workers are classified in Grade-III category and their wages are lower than that of the men. (Ministry of Labour, Government of India, 1980).

In the Assam tea plantations, the women tea pluckers were paid not only less than the men, but also less than the statutory minimum wages. (Basanti, 1982). Despite the Act, they could not avail of any paid leave or holidays.



### The Statutory Benefits

The statutory benefits are supposed to include creches, maternity benefits, and separate toilets. The expenditure for providing these benefits was found to form only 1.2 to 4.4 per cent of the total wage bill of the plantations. (Ministry of Labour, Government of India, 1980). The creches in the North and North-east tea plantations, and in the coffee plantations, were found to be below the prescribed standard of construction and were not maintained in a clean and sanitary condition. When the National Commission visited a tea estate in Kerala, the women said that there was a creche but the services were unsatisfactory as the caretakers were not adequate. As schools beyond the primary stage did not exist in the area, their children were deprived of further education, whereas, the officers could afford boarding schools or maintain two establishments by keeping their wives and children nearer to such facilities. The medical amenities especially in the smaller plantations were of poor standard. An absence of women doctors was a major hurdle for the women workers. The number of women claiming maternity benefit showed a declining trend during the period 1961-74. One of the possible reasons for this is that less women were being recruited. (Government of India, 1980).

The benefits entitled to the women workers are dependant on a minimum number of days' continuous employment. However, a majority of women workers, in reality, do not get employment for more than a couple of months at a stretch. Thus they cannot avail of most of the benefits, especially those related to maternity benefits.

### Living conditions

The houses provided by the employers lacked even the basic amenities. In certain cases, women had to cover, on an average, a distance of about 170 to 525 metres to fetch water from sources like rivers, tanks, canals and streams. (Ministry of Labour , Government of India, 1980). The National Commission also observed the poor condition of the housing of tea estate labourers in a plantation in Kerala.

### General conditions of health

The various basic and generally inter-related factors which may have an adverse influence on the health of plantation communities in the different parts of the country might be classified as follows:

a) Geographic and ecological characteristics of the area: there is evidence that certain diseases are associated with the character of the land on which agricultural workers live and the climate may also influence the occurrence of certain diseases.

b) Inadequate housing and environmental sanitation, which facilitates the spread of endemic and epidemic communicable diseases, including those associated with low standards of personal and public hygiene (e.g. helminthic infestations and dysenteries), proximity and contact diseases (e.g. tuberculosis) and various insect borne infections (e.g. malaria, trypanosomiasis and filariasis).

c) General low-income levels, with their attendant poverty and malnutrition or undernutrition, which are reciprocally related to health; low economic and social levels



are associated with faulty habits of living and low standards of personal hygiene which are important factors in maintaining disease in a community.

d) Inadequate medical and health services; which have a significant repercussion on the endemicity of communicable diseases, maternal, infant and child mortality, and disability and incapacity following accidents.

e) Association with plants and animals, which expose personal living in plantations to certain types of contact dermatitis and to reservoirs and vectors of a wide range of diseases. (International Labour Organisation, 1984,pg.70 and 71).

### Specific Health Problems

Recent technological advances in cultivation methods are bringing in some new risks which are all the more serious in view of the already precariously low levels of health and resistance to infection resulting from the various chronic and endemic diseases women workers are vulnerable to. (International Labour Organisation, 1984,pg.72).

Some of the new chemical products used for weeding, controlling plant diseases and eradicating insect pests are known to be toxic substances harmful to the health of the workers handling them. The chemicals used vary widely and are sold under different commercial names. The use of surface spraying equipment and the aerial spraying of pesticides and insecticides are particularly harmful to the health of the workers. By their constitution, women

workers are much more susceptible to these risks. (International Labour Organisation, 1984,pg.72).

The background note by the sub-committee on plantations, set up by the Union Labour Ministry to consider amendments to the 1951 Act states:

"One of the most worrying major problems of safety and health arising from technical progress on plantations at the cultivation and produce processing stages, arises from the risks associated with the growing use of chemicals, and especially insecticides, fungicides and herbicides." (Ray, 1986,pg.15).

The chemicals used like DDT, endrin, malathion and BHC, affect not only the respiratory system, but also the optical nerves and female reproductive organs. A high incidence of tuberculosis, bronchial ailments, loss of eyesight, including injury to optical nerves, foetal injury and other hazards have been noted in tea plantations. (Ray, 1986,pg.15).

Another type of occupational risk in the plantation industry is the different types of lung affections and bronchial troubles from the inhalation of dust in the workplace processing some of the plantation products, particularly the factories in the plantations processing sisal or copra fibre, ginning cotton, crushing sugar cane or curing tobacco. (International Labour Organisation, 1984, pg.72).

Plantation employment also entails considerable, hard physical work as for example in such tasks as hand planting, axe wielding, etc. The degree of physical stress



is further increased by high environmental temperatures and relative humidity. Malnutrition is common in many plantations, especially where the workers live off a single - crop plantation lacking in protein. (International Labour Organisation, 1983, pg.1712).

The Commission visited tea-pickers on an estate in Kerala. They complained of coughs and colds, backaches due to carrying heavy loads, especially at the height of the season. Their feet are also affected by insects as they work bare-footed on the slopes. They also get headaches due to working in the sun. Alcoholism among their husbands reduces the income both earn and, therefore, reduces the availability of food.

### Mining and Quarrying

Mining is an important sector of industry, from the point of view of the day-to-day running of any production, as our basic metals, as well as everyday items like coal, have to be excavated from the depths of the earth for them to be of any social use. The mines include those of coal, iron ore, manganese, stone, fire clay, china clay, white clay, dolomite, silica, limestone and many others. The mining industry in India, according to Government estimates, employs 75,000 women. (Government of India, 1979).

In 1991, many more women were employed in the mining industry. Women constituted, for example, 38.1 per cent of the colliery labour force. For every ten men employed underground, there were seven women doing the same job. In 1929, the Government of India ordered a gradual

reduction in the number of women working underground. A total ban was promulgated in 1939. The number of women thus dropped to 11.4 per cent. This trend has continued after the independence of the country and also after the nationalisation of the coal mines in 1973. Thus while in 1946, there were 77,784 women in the coal mines, in 1950, there were only 55,000. Between the years 1979 and 1981, another 5,000 women lost jobs through the Voluntary Retirement Scheme or retrenchment (Ghosh, 1984).

In fact, there have been instances of women being cheated out of jobs by introducing the Voluntary Retirement Scheme. In 1976 in Dakra, a Voluntary Retirement Scheme was introduced for women workers only. They were to nominate a male relative in their place. Many outsiders are known to have faked marriages with the women workers or their daughters, promising to look after the family, got the job and deserted them. (Gupta, 1983a; Gupta 1983b). Even as recently as 1985, there was a "major onslaught on women's employment at Chhattisgarh". (Chhattisgarh Mines Shramik Sangh, 1986).

The motive professed for throwing thousands of women out of work was a tender concern for their safety and welfare, as conditions underground were supposed to be unsuitable for the weaker sex. (Government of India, 1979). The real issues were and continue to be evaded. i.e., the problem was not that the work was too hard for women, but that the working conditions for all, men and women, were and continue to be inhuman. Mining continues to be a death-trap for workers. Men and women workers continue to work in



these death-traps, for not working would mean death by starvation. It is this that needs to be remedied, and not shutting the doors of one death-trap to women, so that they may fall into another.

### Working and living conditions

Before the Equal Remuneration Act, 1976, came into force in the mines, women did the heavier jobs, but were paid much less than the men. After the Act, however, employers have preferred to discriminate against women at the time of recruitment itself, by not recruiting women at all. According to a study by the Government of India, (Government of India, 1979), 71 per cent of women are in unskilled and 29 per cent in semi-skilled jobs. There is not a single woman holding an administrative, executive or managerial position in any of the mines. Nor are women ever promoted from unskilled to semi-skilled or supervisory levels. None of the mines have a regular channel of promotion for women. By keeping women in the lowest-paid, unskilled jobs, and never allowing them to move upwards to higher-paid jobs, the employers cleverly evade the equal wage legislation. In fact, as the Report of the Committee on the Status of Women in India (1974) pointed out, not only in mines, but in most of the older industries, the majority of women are employed in unskilled or semi-skilled occupations. Employers deliberately recruit women only at these levels and never train them for graduation to higher levels, so that their wages can be kept lower than those of the men. (Committee on the Status of Women in India, 1974). Women become a pool of cheap labour for employers and can be used to replace men at lower levels. (Manushi, 1980).

In the Udaipur marble mines, men are paid Rs.9/- per day, though the prescribed minimum wage is Rs.11/- per day. The women receive only Rs.5/- per day and the children get between Rs.4/- to Rs.5/-. (Pardesi, 1985).

However, in the unorganised kilns, quarries and mines, women and children form a majority of the workforce. In the limestone kilns and quarries in and around Katni, in north eastern Madhya Pradesh, 70 to 80 per cent of the workers are women and children. (Sen Gupta, 1983).

While on the one hand women are 'protected' against not working underground, or on night shifts, on the other hand, women are observed to carry baskets of ore weighing upto 35 kilograms. In the stone mines, the highest proportion of women (46 per cent) are employed on the stone crushing machine as unskilled labour. These women carry headloads of material up to the machine while in the technical processes of running the machine, only men are employed. (Manushi, 1980, pg.58). In a dolomite mine, the Commission members visited, women carried the stones upto a weight of 20 kilos on the their heads. The tribal women of Singhbhum district, Bihar, are engaged for loading and unloading of iron ore and other minerals at the mines and elsewhere, with their bare hands. (Express News Service, 1987).

The average wage rates of women are much lower than those of men workers. In the iron ore mines, women get 67 per cent less than men in their minimum total pay packet and 80 per cent less in the maximum pay packet. Women are quite blatantly paid less than the men for doing the same jobs. Thus, in many mines, the male ore washing operator earns Rs.2.50 daily and the woman Rs.1.81. The male



helper earns Rs.2.63 and the woman Rs.1.08. The average weekly earnings of women workers, employed in open cast workings in iron ore, graphite and bauxite and above ground in asbestos mines, were even less than half of the corresponding earnings of men. (Manushi, 1980, pg.58).

Besides this direct breaking of the law, the employers also indirectly evade it by not employing men and women for the same jobs so that they do not have to pay them the same wages! The lowest-paid jobs are 'reserved' for women. This restriction of women to a few selected tasks is one of the most important factors adversely affecting women's employment. (Manushi, 1980, pg.58).

Not only are the jobs 'reserved' for women, the most unskilled and, therefore, the lowest-paid, they are also usually paid at piece-rates instead of time-rates. It thus becomes easier to discriminate, because the women work longer hours, but are paid according to their output, not according to the time put in, while the men are paid a fixed wage, for a fixed number of hours and are under less strain to increase output. Fifty five per cent of women in coal mines are employed in wagon loading and unloading, and are deliberately paid at piece rates. Only seven per cent of men workers do these jobs! Both the average minimum and maximum earnings of women engaged as general mazdoors and miners in iron ore mines, excavators or diggers in manganese mines, stone-breakers, carriers and earthbreakers in limestone and dolomite and wagon loaders in china clay, fire clay and gypsum mines, are much less than those of corresponding male workers. (Manushi, 1980, pg.58).

In the limestone quarries at Katni, Madhya Pradesh, women workers and also children are "engaged in back breaking work, carving out chunks of stone from the earth,

breaking them and then carrying them up in tokris (baskets) to the edge of the pit - a gruelling climb of 70 to 100 feet." For each climb, the women are given 10 paise. Thus the women and children have to work continuously for 11 to 12 hours a day in order not to starve!! ( Sen Gupta, 1983, pg.29).

The Government machinery to implement the equal wage legislation is highly ineffective. In any case, it is impossible to ensure wages to all workers doing the same job without first ensuring job security. Hiring on a temporary or casual basis is one of the oldest means used by employers to evade laws which protect the interests of labourers. Fifty six per cent of all women workers in the mining industry are temporary as against 21 per cent of the men. A large number of these women are still 'temporary' after five years of service and some are 'casual' workers after ten years of continuous service. In a large number of the sampled units, not a single woman holds a permanent status. Often, employers deliberately cause breaks in service so that the women cannot claim permanent status. The women are utterly helpless and have no bargaining power-they can be thrown out at a moment's notice. In one quartzite mining unit studied, the employer terminated the service of all the casual women workers who were being paid less than their male counterparts, just before the visit of the field investigators to that unit. (Manushi, 1980, pg.59).

On the other hand, often many mines are declared "dangerous and closed" by the Union labour ministry. However "political connections and corrupt officials enable the hazardous operations to continue unchecked" (Business Standard, 1983). Unemployment and starvation forces the workers to continue to work in the illegal mines. Working by gas lanterns and truck headlights, thousands of workers, including women, mine till early morning in pits 60 to 90 feet deep. Since these mines, quarries and pits do not



legally exist, the workers are paid "illegal" wages and often deaths and accidents, which are more frequent than in the 'legal' mines are not even reported. Compensation to the victims is an absolute far-cry !

There is only three per cent literacy among the women. Illiteracy is often cited by employers as the reason for keeping women in unskilled jobs. However, no attempt is made to provide educational or training facilities to women. Though the law requires employers to provide schools for workers' children, only 25 per cent of them actually do so. Fifty-five per cent of the boys, and 23 per cent of the girls, attend school. Most girls have to leave school and look after the house and younger siblings while the parents are at the mines. (Manushi, 1980).

In the unorganised quarries like those hundreds of pits at Katni, most of the women workers are "unlettered Adivasis and Harijans - easy meat for the most vicious exploitation". (Sen gupta, 1983).

The day of an average woman mine worker begins at five a.m. She spends on an average, four to six hours on domestic labour, before and after her eight hours of hard manual labour, at the mines. The quarters provided are usually far from the mines and have to travel to and fro on foot. They also spend a lot of time fetching water, as most employers ignore the law which requires them to provide clean drinking water supply. Eighty-eight per cent of families are dependent on some common source of water supply, located far away from the dwelling place. Water is drawn from wells, tanks, rivers, ponds and mine pits. Such water is obviously unfit for consumption and very dangerous to health. In some units, there is an acute shortage of drinking water. (Manushi, 1980, pg.59).

Ninety-five per cent of the women do all the housework which includes cooking, washing clothes and utensils, and cleaning the house. However, approximately, 40 per cent take part in what are classified as "family decisions" but are actually decisions primarily affecting the woman herself. Such decisions are choice of family size, education and marriage of children. In a majority of cases, even the decision about the number of children, which vitally affects the woman's health, life and right over her own body, is taken solely by the husband. (Manushi, 1980).

#### Facilities at the workplace

The statutory provisions classify creches, maternity, benefits, and separate toilets for women, as special welfare amenities for women. As in other industries, it is necessary to question why these "welfare provisions" are supposed to be only for women. Children are not the only responsibility of women and nor are toilets used by women alone. (Manushi, 1980). In a chrome processing mine, the women said they went to the adjoining woods as no toilets were provided.

There are many mines where the workforce is not organised and, hence, none of these so-called welfare amenities are available to women at all. However, even in the "organised sector" these provisions have been rendered meaningless due to non-implementation or gross scuttling of statutory provisions.

Though the cost of providing these so-called welfare amenities for women adds up to only 0.2 to 1.8 per cent of the total wage bill, employers avoid providing them



and complain that these statutory provisions act as a deterrent in the employment of women! Only 50 per cent of units are complying with the Mine Creche Rules and only 7.2 per cent of the women in these units can actually use the creches. Mothers prefer to leave their children alone or with older children because the creches are more of a farce than anything else. They are situated so far from the workplace and the living quarters that the women face another problem in going to leave or fetch the children. Further, the children are badly neglected, not fed according to the schedule given in the rules, and often ill-treated or beaten by the crech staff who are untrained people.(Manushi, 1980). In the two mines visited by the National Commission, while women were employed, there were no creche facilities available.

So also, the dispensaries have only male doctors on duty. Women workers, vulnerable as they are, remain naturally wary of going to them for any complaints that would require physical examination. Thus, many dangerous diseases remain undiscovered till complications develop and women suffer in silence, even die from sheer neglect. The rules provide for maternity leave after a woman has worked continuously for 160 days. Since most women are temporary or casual labourers, continuous service cannot be proved from records even though they may have been working for years together. Employers see to it that breaks of a couple of days are recorded in the service of permanent women workers so that they can be deprived of maternity benefit. This benefit is supposed to include a medical bonus of Rs.25/- but even this ridiculously low sum is rarely given to any of the women.(Manushi,1980).

In the completely unorganised sector of the mining and quarrying industry, like the 'illegal' mines at Haryana, near Delhi and other places, like the limestone quarries in Madhya Pradesh, the workers in the Meghataru Iron ore project (Mattan, 1984) the marble mine workers in Udaipur, stone workers in the Santhal Parganas (Poddar, 1984) and thousands of mines and quarries all over the country, there are no facilities of clean drinking water rest-shades, toilets, creches, medical or leave facilities. Protective equipments like masks, protective gear for head, hands, feet, nose are rare.

Workers in mines are among those who have paid the heaviest tribute to occupational risks. (International Labour Organisation, 1983, pg.1379). The hazards to health involved in the mining industry may be classified as follows:

#### Respiratory problems:

The principal health hazards in a mine are related to the poor quality of the mine air and to the presence of dust, poisonous gases or other airborne impurities. Even the gases which are not toxic have an adverse effect, because, by their presence, they create a relative deficiency of oxygen. One of the most common impurities in mine air is dust. Rock dust is released into the air from operations like drilling, blasting, loading, haulage, shovelling, tipping, crushing, cutting, grinding and so on. Fine particles are particularly dangerous due to their ability to settle in the lungs. In mines, where the



rocks are highly siliceous, the dust hazards is particularly serious. (International Labour Organisation, 1983, pg.1377).

Harmful gases, affecting workers in the mining industry, are carbon dioxide, carbon monoxide, nitrogen oxides and hydrogen sulphide.

Pneumoconioses is a common hazard of mine workers. Pneumoconiosis is a collective name given to lung diseases on account of continued inhalation of dust. A recent study in the Kolar mines indicated that, the number of cases of pneumoconiosis has constantly increased. The disease aggravates the condition of a person already subjected to other respiratory complications. Cancer may be a result. Stomach, liver, kidneys and the central nervous system, are also affected by toxic dusts. (Times of India, 1986).

Other obstructive lung and lung dust diseases like asthma and bronchitis (Wage Earners, 1982) have also been noted.

Mica miners are exposed to the inhalation of a wide variety of dusts including quartz and silicates. Many cases of silicosis have been observed in India. When mica is prepared by dry grinding, the handling and packaging operations are very dusty. Exposure of workers to mica powder causes irritation of the respiratory tract and, after several years, nodular fibrotic pneumoconiosis. (International Labour Organisation, 1983, pg.1358 and 1359).

For the mica miners of Koderma in Hazaribagh, Bihar, and the agate workers of Khambhat in Gujarat, according to reports, "there is no escape from the occupational diseases like silicosis." (Indian Express, 1987). This, despite the Directive Principles of State Policy of the Constitution of India laying down specifically that the Government should ensure, "that the health and strength of workers are not abused". (Indian Express, 1987).

The mining of radio active ores is coupled with radiation hazard, e.g., uranium, radium or thorium mines. The presence of arsenic in many ores may lead to serious health problems. (International Labour Organisation, 1983, pg.1378).

#### Accident hazards:

Mining is a hazardous calling and, among the major industries, it is regarded as the most dangerous. This conclusion is borne out by the death and other casualty rates associated with mining.

There are various types of mining accidents, falls of ground, haulage and tramming, machinery and tool handling, movement of personnel and falling objects, explosions and other underground and surface accidents.

There have been serious fatal accidents underground-- 200 in coal mines alone in the year 1974 (Hindu, 1983). Recently, in 1986, nine women were killed and one injured



in a mine collapse in Katni, Madhya Pradesh. "The women had entered the mine to dig white clay, when it caved in". (Times of India, 1986). These figures are much higher in 'illegal mines'. "No authentic data about the extent of illegal mining are readily available, but the Government has confirmed the death of at least 21 persons while engaged in such operations in 11 nationalised mines in Bihar and West Bengal during the period March 23, 1981 to March 18, 1983". (Hindu, 1983).

In a chrome mine visited by the Commission, the women had to break the alloy. No protective glasses were provided, in spite of the chips flying from the breaking of the alloy.

#### Environmental hazards:

These include the lighting of worksites. The poor lighting in mines has given rise to a disease called miners' nystagmus. It affects middle-aged or elderly coalface workers. "Nystagmus is found in miners who, for most of their lifetime, have worked, firstly, under lighting conditions, too poor to stimulate the cones of the retina, and secondly, either stooping or lying on their side and looking up so that the eye muscles are put on the stretch. Affected workers become unsteady on their feet, and bright lights dazzle them so that they have to spend their time sitting indoors or walking through the fields with caps shielding their eyes. They develop a state of anxiety followed by depression, particularly after a period of unemployment and financial hardship." (International Labour Organisation, 1983, pgs. 1379, 1361 and 1362).

Climatic factors also affect the health of workers. Heat damp and thermal stress are important reasons. The first consequences of thermal stress is a reduction in physical activity. Heat cramps and heat strokes result, sometimes killing the workers. In the aforeside alloy mine, visited by the Commission, the women had to sit in the hot sun when a shed could have been easily provided. Cramped conditions of work and atmospheric pressure are also important factors affecting the health of mine workers. Noise, vibration, risks of poisoning, cause severe health problems. Physical hazards include the heavy workload, especially for women, who are usually employed, year after year, on piece-rate and have to exert themselves every minute to earn a pittance. (ILO, 1983, pg. 1380).

#### Biological risks:

Often the worksites are infested with rats. Leptospirosis icterohaemorrhagica is a recognised occupational hazard in many countries. (International Labour Organisation, 1983, pg. 1381).

The diseases or illnesses observed among mine workers include, intestinal parasitic infections, eye diseases like pterogjum, anomia and glucos- 6 - phosphate elehydrogenase diseases skin diseases like dermatamycosis, (Wage Earners, 1982), burning of the skin and eyes. (Sen Gupta, 1983).

Gold miners have been observed to suffer from arsenic poisoning and sulphur dioxide poisoning. The workers develop dark spots on the soles and palms, skin irritation, sleeplessness and loss of sight. (Hindu, 1987).



Most of the mines, quarries and kilns are situated at great distances from the rest of the city or town. And hence there are very few doctors, if any, available for the serious ailments of the mine-workers. Most of these ailments are not treated, nor can the mine workers avoid the source of their ailment, as they have to continue to work to be able to eat a meal. Thus even young girls and boys continue to work till their premature death. It is urgent that steps are taken to ensure the workers in the mines and quarries a healthy workplace and a healthy life.

### Quartz Crushing

The quartz stone is quarried from open-cast mines in the Panchamahar district of Gujarat state. There are about 20 to 30 units engaged in the manufacture of quartz powder. Each factory employs about 6 to 40 workers. (National Institute of Occupational Health, 1986, pg.2).

Quartz crushing is essentially a dry process. Large quartz stones are first broken by a hammer into smaller stones of about 6" diameter. This work is carried out in the open space outside the factory walls. These stones are then carried in buckets by the workers of both sexes to the jaw crusher. In the jaw crusher, the stones are crushed to the size of a pebble or a little larger. These stones are then taken by a conveyor to the disintegrator where the stone is milled into powder form. The milled powder is taken by an elevator to a sieve operated by a mechanical vibrator. In this sieve, the powder is sifted

through the screens of varying sizes (usually 80-400 mesh), and thus the powders of different sizes are separated. The screened powder is collected into the bags which are then weighed and sealed. The left over coarse powder is further milled in the ball mills. The workers in these units are employed on a daily-wage basis and the labour turnover is very high. Thus the number of workers employed by a particular factory varies from day to day. The workers in this industry, do not have any security of employment. (NIOH, 1986, pg.2 and 3).

The process of breaking of the larger stones is relatively free from any dust hazard, because, during, this process, there is very little generation of dust and the work is carried out in the open space. Large quantities of dust are generated during the process of crushing and the disintegration of stones and also during the process of weighing and bagging the powder. Most of the work carried out by the workers in this industry involves heavy physical work leading to deep and rapid breathing. This deep and rapid breathing may cause even greater penetration of fine airborne dust deeper into the lungs. (NIOH, 1986, pg.3 and 4).

A medical study of 65 male and 28 female quartz crushing workers conducted by the NIOH revealed that the mean value of 'total and 'respirable' dust concentrations was very high in the workplaces. The mean value of total dust concentrations was between 81 and 660 times higher than the threshold limit values (TLVs) suggested by ACGIH(1977), and in some samples it was up to about 1000times higher. The radiological findings indicated that 12 per cent of the workers were suffering from silicosis.(NIOH, 1986, pg.6).



The following table shows the distribution of the cases of silicosis in quartz grinders according to the duration of exposure. It is seen from the table, that the duration of exposure, in a majority of the workers is less than one year, but even this short duration of dust exposure has caused silicosis in 3 (6.8 per cent) cases. It is further seen from the table that, with longer exposure, there is an increase in the prevalence of silicosis. (NIOH,1986,pg.7).

Table 2.6

DISTRIBUTION OF CASES OF SILICOSIS IN QUARTZ GRINDERS  
ACCORDING TO DURATION OF EXPOSURE

Exposure Group	No.of Cases of Silicosis
Less than 1 year (44) <sup>a</sup>	3 (6.82) <sup>b</sup>
1 - 2 years (14)	3 (21.4)
2 - 3 years (12)	2 (16.7)
More than 3 years ( 5)	1 (20.0)

a = Number of workers

b = percentage

(National Institute of Occupational Health,1986,pg.19).

The following table shows the prevalence of respiratory symptoms amongst quartz grinders suffering from silicosis. It is seen from the table that the commonest symptom amongst the workers was dyspnoea on exertion. This symptom was more than twice as common amongst silicotics than amongst the non-silicotic quartz grinders.

Table 2.7

DISTRIBUTION OF RESPIRATORY SYMPTOMS AMONG QUARTZ GRINDING  
WORKERS HAVING SILICOSIS

Symptoms	Percentage
Dry cough	11.1
Cough and Expectoration	22.2
Dyspnoea	66.7
Haemoptysis	-
Chest pain	22.2

National Institute of Occupational Health, 1986, pg. 19).

A more shocking fact is that during the follow-up of the ex-workers, it was realised that a large number of these workers (about 90) had died after they left their jobs. Most of these workers were between 30 and 35 years of age !! (NIOH, 1986, pg. 9).

### Chrome Processing

The Commission visited a chrome processing factory, where men were involved in processing while the women break up the lumps of the alloy. The women have to sit under the hot sun to do this, although, sheds could be easily provided. Women also have severe eye-problems due to the chips of the alloy flying into their eyes. They wanted protective glasses.

### Stone-crushing

Women are employed in the breaking and crushing of stones for such use as in the building of roads, and construction. A maximum number of women at any one place



are deployed for such work in Bundel Khand division in Uttar Pradesh and in Rajasthan. Women are constantly exposed to the stone dust with effects on their respiratory system. (Department of Science and Technology, 1984, pg.8).

### Construction Work

According to the 1971 Census, 2.22 million workers were engaged as construction labour, comprising of 2.02 million men and 0.20 million women. Females workers were 9 per cent of the total workers in construction.

The 1981 Census records a substantial increase in employment in this sector. The number of total persons employed in 1981 was 3.56 million i.e. and increase of 60 per cent over 1971. The number of women workers during the decade increased from 0.20 million to 0.36 million, the growth in women's employment at 80 per cent being higher than the average 60 per cent for the sector as a whole. The share of women workers in the total construction workers rose from 9 to 11.16 per cent. (Jain, 1984).

Since 1948, wages of construction workers are subject to Minimum Wage legislation. In 1969, equality of wages between men and women workers was introduced by law. A State Government Committee fixes the wage rates and revises them periodically. The wage rates for male and female workers over time, from 1951 to 1981, indicate both (i) an increase in absolute terms and (ii) equality in wages since 1979. In 1982-83, the rate was Rs.9.25 per day. (Jain, 1984).

Though the Contract Labour Central Rules (1971) prohibit "deductions of any kind," the study by the National Institute of Urban Affairs (NIUA), in 1982, found that 83 per cent of the workers received a mere Rs.8.25 instead of Rs.9.25. About 10 per cent received as low as Rs.7/. Only 2 per cent of the workers received the prescribed wages. Besides these deductions, their earnings are also being eroded for lack of linkage with the consumer price index which since 1974 has been rising at a much higher rate.

### Wage discrimination

The committee for status of women had initiated two studies on women construction workers in 1975, one in Patna (covering 3 major projects), and the other in Delhi (covering 9 construction sites). The findings of these studies illustrate the conditions of women in this industry. (Sinha and Ranade, 1975).

Women are employed mostly as unskilled labourers for carrying earth, mortar or bricks, crushing bricks and working hand-pumps. Recruitment is mostly done either directly by the contractor or the sub-contractor (Jamadar). Wage payment is on daily or weekly basis. The Bihar study reported that the sub-contractors obtain a contract for the job on piece rate basis but pay their workers on a daily basis, ensuring a higher margin of profit for themselves. Workers complain of short payment, and unexplained deduction. The system of deferred wage payment and unjustified fines and deductions, are reported in both the studies. The Bihar study reported that, in the case of tribal women, part of their wages are kept back to be paid at the time



of termination of employment. The Delhi group reported that, apart from fines, the Jamadar deducted 25 to 50 paise per day from their wages without giving any reasons. The existence of these intermediaries invariably depresses the wage rates. Women from all the three Bihar projects reported wage differentials between men and women. (Sinha and Ranade, 1975).

In Warangal, wages are paid in two ways, canal workers are paid both in cash and kind, while the road and building workers are paid only in cash. The payment in kind for canal workers includes two 'meals' consisting of 200 grammes of rice and tamarind water. (Manohar, 1983).

On an average, women working on roads and building construction do not get employment for three months in a year. The total family monthly income for 41 per cent of the families was Rs.220/-, and the remaining earned, not more than Rs.110/-. Although, there has been a slight increase in the earnings of women over the year, in terms of purchasing power, this slight increase has been largely eroded. The existing legislation is not comprehensive enough to cover all categories of construction workers and where a few labourers were covered under these, there was little respect for the laws. As casual labourers or daily wage workers, even in principle, no law guarantees their minimum wage. Their wages differ from place to place and the workers always stand at the receiving end. Since they are unorganised, they have no bargaining capacity.

As a result of meagre and irregular incomes, the economic position of these women and their families has

deteriorated over the years. Canal workers had been provided accommodation in small huts, located at the canal sight. The rest lived either under the trees or in rented huts located mostly in slum areas. About 86 per cent of the respondents indicated that they had taken loans ranging from Rs.50/- and Rs.1,800/-. (Manohar,1983). The women construction workers in Madras city get a mere Rs.5/- to Rs.6/- and have to work the entire week. Sometimes, when the contractors get workers from outside, like Salem, they are given only Rs.3/- per day. (Mallika,1985). In many place is Bombay, the women get Rs.15/- per day and the men get Rs.25/- to Rs.30/- per day. (Society for Promotion of Area Resource Centre,unpublished).

Another important factor experienced by women construction workers all over, but verbalised by the women from Madras, is that not only are women made to do work which is considered "unskilled", but they are given no opportunities to learn any skill like masonry or carpentry and, hence, continue to remain in the same "unskilled" work till the end of their working lives. As one of them put it:

We have no raises or dearness allowance. At least the men can hope to become masons or supervisors. But we women remain as sitthals, (small people - who do the little work) all our lives. (What is ironic is how some supervisors avoid paying masons wages they take us and let us mix cement and lay the bricks, but give us just a little bit more than our usual wages". (Mallika,1985).

According to another study, carrying granite rocks on head is the hardest and the most hazardous of female jobs, in the construction industry.



Normally, each piece of rock weighs between 35 to 40 kilos. A man lifts the rock and places it on the woman's head. Usually, if the place of unloading is within a radius of 10 feet, the women may have to carry a heavier rock. On an average, she transports around one tonne a day, unless the distances are very long. (Gulati, 1981, pg. 110).

A study on the construction workers in India sums up the situation of women in the industry thus:

The women workers in the construction industry do the most strenuous and unskilled jobs like brick-making, stone quarrying, assembling of construction materials, lifting of stones, bricks and cement, etc. Despite their principal role in the construction work, they are not considered as the main labour force. The employers generally consider them as mere helpers and give them less wages than the male labourers. The discrimination never ends at the wage level. The amount of physical hardship and its consequent effects upon the health of the women are never realised. The strenuous work can cause major health hazards to the pregnant women and lactating mothers. Carrying heavy loads upon the ladder and over uneven surfaces can cause spontaneous miscarriages in case of pregnant women. Knowing all this, till today, there is no provision of maternity benefit, creche facilities, etc., for women construction workers. Further, women workers continue to work as helpers throughout their lives, since they are denied training as skilled workers. Sexual harassment of women workers in this industry is also quite widespread. (Society for Participatory Research in Asia, 1986).

According to the Status of Women Committee Report, 1974, the household incomes of nearly 80 per cent of the respondents in Delhi is between Rs. 200 and Rs. 300/-. The per capita monthly income is below Rs. 75/- for 45 per cent,

and below Rs.50/- for a little over 20 per cent. For the Bihar group, the average household income ranges from Rs.194.4 to Rs.334.45; per capital monthly income ranges from Rs.38.88 to Rs.66.60. For all the families covered by these two studies, the earnings of the women constitute the major share of the family's income. The expenditure pattern reported by both the studies indicates that the major part of the income is spent on food and other essential items of daily need. Indebtedness was found in 37 per cent of the Delhi group and 37 per cent of the Bihar group (58.7 per cent among non-tribals and 10.3 per cent among tribals). The most important reasons for taking loans are sickness, to meet gaps in normal consumption, and marriage expenses. These debts generally remain unpaid. (Committee on the Status of Women in India, 1974, para 5.088).

The women construction workers in Delhi and Bihar were mostly drawn from the rural poor (77.6 per cent of the Bihar group and 86 per cent of the Delhi group). The Delhi group consisted of migrant labour from Rajasthan and out of 150 respondents, 144 belonged to the scheduled castes. Ninety per cent of the Bihar group belonged to the scheduled castes and scheduled tribes from the Chhotanagpur region. Almost all the women reported poverty as their main reason for taking up construction work. Seventy eight per cent of the Bihar group and 80.76 per cent of the Delhi group, were young women below 35, as the nature of construction work makes heavy demands on physical strength. Forty per cent of the Delhi respondents began to work before reaching their 15th year, and 40 per cent had already worked for more than 7 years. At least 1/5th of them had held more than 4 jobs. Of the Bihar group, 81 per cent had begun their working life as wage labourers very early in their childhood. Of the rest, 12.7 per cent became wage labourers between the ages of 15 to 20.



In a study conducted in the city of Warangal, in Andhra Pradesh, the author discovered that a large number of construction women workers had joined the work force when they were less than ten years old. Among the canal workers, 70 per cent of the women were married when they were below 15 years of age, 98 per cent belonged to either the backward castes or scheduled castes and tribes. While women are discriminated against in the payment of wages, they are also the first to be thrown out. Thus, there has been a fall in the percentage of women workers in the construction industry in the city. Even those who remain, do not get employment for the whole year. (Manohar, 1983).

### Working hours

Women generally work for 8 hours a day in construction activity. There is usually a rest break of one hour but no facilities are provided for them to rest and, often, where rest rooms are provided, they are common to both men and women, contrary to the Contract Labour Control Rules, (1971). These rules also require a canteen and drinking water to be provided, but there is little compliance of these rules. According to the study by the National Institute of Urban Affairs, "half the women workers had no facilities for potable water. Latrines, urinals are also not provided and women have to use open land for toilet purposes. There is no paid holiday". As for medical aid "at the time of survey we (NIUA) found at all the sites, that many workers were suffering.....and were totally unattended". (Jain, 1984, pg.3).

The rules regarding working and living conditions are generally violated. For example, the CPWD contract clause 19F states, "A contractor should provide to the female workers in case of delivery, maternity leave, not exceeding 8 weeks, 4 weeks up to and including the day of delivery and 4 weeks following that day, and, in case of miscarriage, up to 3 weeks from the date of miscarriage". In the NIUA survey, none of the eligible women had ever been given maternity leave. A majority of the women workers were in the age group of 16 to 35 when maternity leave would be most required. More than 50 per cent had to resume work within 4 weeks. (Jain, 1984, pg.3).

The provision of creches was rare. Women construction workers who have used them, found them extremely beneficial and wished "to have a creche at every site where they worked". CPWD rules also require the contractors to provide housing facilities, and though, in most cases these are provided, they are invariably below the prescribed specifications and are like "dark hovels". (Jain, 1984, pg.3).

The NIUA survey found that "about 95 per cent of workers did not have a ration card". Besides, "Women had to collect fuel, water, cook and attend to children along with long, hard hours of working. Facilities like ration cards, ration shops nearby, fuel shops, which would reduce the burden of the women to some extent were seriously lacking". Conditions at EGS sites are equally unsatisfactory in respect of rest rooms, toilet facilities and distribution of rations. (Jain, 1984, pg.3).

COMMUNITY HEALTH CELL  
328, V Main, I Block  
Koramangala  
Bangalore-560034 -  
India

01996  
GTE  
WH100



The Bihar study, which covered only Government projects, reports that the period of actual work was found, invariably to exceed the scheduled 48 hour week. On particular days, the period exceeded the maximum of 9 hours, by 4 or 5 hours. None of the women received pay for the weekly holidays. Though overtime is common, payment for such work was "rare, primarily because of the ignorance of the workers and the absence of the law enforcing agency". No arrangement had been made for creches in any of the 3 sites though 43 of the respondents were carrying small children with them to work. (Sinha and Ranade, 1975).

In the Warangal study, it was found that canal workers had one day off for every fifteen days of work. Paid holidays were not given during the festivals. Most of the respondents complained that they were entrusted with some work even on holidays. The Labour Welfare Officers and Public Works Engineers seldom took interest in ensuring that facilities like first aid, drinking water, washing and bathing places, latrines, urinals and other sanitary arrangements, shelter during rest, creches, canteens, sheds, etc., as mentioned in the contract regulations were provided. The material provided by the contractor for the construction of huts was sufficient to construct only a 4' wide, 5' long and 5' high hut, with no ventilation. Due to lack of accommodation in the hut, parents slept outside. Their huts were ill-suited for rainy seasons. In regard to women workers on road and building construction, no single additional amenity was provided, despite the fact that in several cases their workshops came under the Public Works Rules and other regulations. (Manohar, 1983).

Since most of the labourers are indebted to the contractors before their appointment, the canal labourers cannot leave the workplace without clearing the entire loan. A few instances of labourers escaping from the workplace were reported, but the agents or musclemen of the contractors brought them back to work. In such cases, they were kept under strict surveillance. The contractor took steps to prevent the workers from leaving the workplaces and rarely allowed them to enjoy their entire earnings until his debt was cleared. Although they are required to work for eight hours a day, many said that they were asked to work for longer hours without any additional payment. Those who refuse such overtime are not treated properly. The contractor also uses the workers for political ends. About 90 per cent of the respondents who could vote were directed to cast their votes in favour of a particular candidate. (Manohar, 1983).

### Health

In the Warangal study, it was found that most of the women workers were in poor health. Around 40 per cent were sick during the last two years and were in bed for more than a week each time. Only two per cent of them had gone to private hospitals; but even in a Government hospital, they had to pay for medicine. Some could not get admission in a Government hospital because they could not pay bribes. The canal workers complained that due to excessive use of tamarind water, supplied along with rice, they had diarrhoea, muscular pain, intestinal troubles and gastro-enteritis, amongst other illnesses. Since the contractor gave only



tamarind water along with the rice they could not escape from such diseases. (Manohar, 1983).

Medical facilities at the construction area are minimal. No trained doctor is available and no medicine is supplied. Patients are asked to go to Government hospitals and their wages are invariably cut during their absence from work. Many among the respondents, who had reported long illness, said that they had to stop working for periods ranging from three days to two and a half months. They felt that visiting a doctor was a luxury which they could not afford. This was more true in the case of children. Whenever they fell sick, they either put off treatment or went to quacks. As a result, the death rate among the children is high. (Manohar, 1983).

The Bihar study also reveals that a majority of the women continue to work even when they are ill rather than go without food for themselves and their dependents. Of the Delhi group, 30 who had suffered from some illness lasting more than one week, had received treatment in Government dispensaries and hospitals and 22 had been compelled to discontinue work for periods ranging from 4 days to 6 months. They did not receive any wages during such absence. The other 8 continued to work during illness. (Sinha and Ranade, 1975).

Mobile Creches conducted a study of 2,076 construction worker families in Bombay in 1986. Their findings indicate that nearly 41 per cent of households reported at least one sick person. Fevers (39.7 per cent) and Coughs and Colds (21.9 per cent) were the major health

problems encountered. Fevers, Coughs and Colds, and aches and pains made up the majority of the illnesses. The report comments, "On the surface these appear like relatively low morbidity illnesses, while, in actual fact, they could be including more serious ailments like pneumonia, tuberculosis, leprosy, etc." (Mobile Creches, 1987,pg.33).

Another important finding of the study relates to the utilisation of health services by this important section of women workers. It was found that despite the fact **that many** construction workers are physically located in urban areas, they live in isolation from local services and are unable to utilise hospitals and dispensaries. The main source of treatment sought by 82.2 percent of all households is from private allopathic practitioners. This is because private practitioners are closer to their place of residence and they do not have to "avail of public transport services which they cannot understand or cope with". The "time consuming exercises needed for attention in any public hospital" and the "totally indifferent and unsympathetic" attitude of the hospital staff add as further deterrants for the women needing health care. (Mobile Creches, 1987,pg.36).

### Pregnancy and delivery

More than half of the women workers in the Warangal study worked till the day of the delivery and resumed after three or four weeks. Just as in the case of sickness, there was no paid leave during pregnancy. As a result, most women workers, continue to work at least till about the eighth month of their pregnancy. This has



adverse effects on their health and on the health of the new-born infants. Almost all the respondents had delivered at home, with the assistance of elders or neighbours. Canal workers experienced more difficulties than those in road and building, as elders' help was not always readily available to them. (Manohar, 1983).

Of the Delhi group, 23.37 per cent had continued working till the last day of pregnancy and 40.14 per cent, till the 8th or 9th month. This indicates that the provisions of the Contract Labour Act, guaranteeing maternity leave, have not been applied in the case of these women. Absence of the minimum health protection during pregnancy, as well as continuous malnutrition, has resulted in high infant mortality. Six hundred and forty five children had been born to these women but at the time of the survey, only 389 of them were alive. For the Bihar group out of 233 children born to the women, 67 were dead, and 29 of them had died before reaching the age of 1 year. The women workers in Madras too had to work, "even when we are 8 or 9 months pregnant. We work so we can eat. We have to take our small babies to work as well". (Sinha and Ranade, 1975).

In the recent Bombay study, almost three fourths of all households reported home deliveries. Most of "these home births are usually attended and assisted by the older women in the community, and are conducted under very primitive conditions". This reflects in the high incidence of child mortality and still births. (Mobile Creches, 1987, pg.37 and 38). In another study in Finland, using

hospital discharge records, construction workers were found to have above-average rates of spontaneous abortions or miscarriages. (World Health Organisation, 1986).

### Hazards

According to a study of work hazards in the construction industry in India, a high degree of risk and danger is involved in this work. (Society for Participatory Research in Asia, 1986). The work proceeds in most dangerous situations, under sun, cold, heat, rain and dust. The magnitude of accidents and occupational diseases associated with this work is appallingly high and complex. It is because most of the operations are labour intensive with the presence of inadequate safety measures, low quality of materials used, non-identification and non-recognition of risky actions, non-analysis of accidents and lack of training of workers in safety. (Society for Participatory Research in Asia, 1986).

The causes of accidents have been identified as:

1. failure or collapse of scaffolding, centering and shuttering,
2. improper guard against the work environment,
3. night work without proper lighting,
4. fire and electrocution,
5. excessive noise
6. handling of heavy finished and semifinished materials, like metals
7. blasting
8. underground work



The causes of other health hazards have been identified as:

<u>Cause</u>	<u>Effect</u>
Cement Dust	- Irritation to lungs, cancer and skin disease.
Plaster	- Irritation to lungs, eyes and skin and lung cancer.
Wood burning	- Asthma and nasal cancer.
Sand	- Silicosis
Asbestos	- Asbestosis(lung disease)
Work at heights	- Blood pressure.
Sound	- Loss of hearing, stress, blood pressure
Heat	- Heat cramps and sun burns.
Vibration	- Numbness of hands and fingers
Repetitive work	- Sprain, rheumatism

The women construction workers of Madras talk about the dangers of their work - the constant possibility of losing a limb or life itself. They talked about the accidents they had met with. According to them, every week there are at least a few deaths in the city. "If we lose an arm or leg in an accident, we get may be ten rupees, but no real compensation or medical treatment. If we die in an accident, the family is on the streets". (Mallika, 1985).

The rate of accidents reported in the recent Bombay study was also very high.

An incredibly high, 14.4 per cent or 297 of all surveyed households had at least one member injured in an accident on site either from a fall, electrocution or from

falling debris. On an average, one out of every seven households had suffered accident injuries - a very grave and horrifying picture of the lack of safety measures and protection to workers on most construction sites. Sixty-five per cent of the workers had not even received any compensation. (Mobile Creches, 1987, pg. 46).

There was also a very high rate of accidents among the children, even those not working. This was mainly due to falling debris and tripping over things leading to fractures.

"A recent report of the National Institute of Occupational Health states that women in construction industry are susceptible to occupational stress due to constant shifting of fresh mortar (Cohen, 1982). In India, women in construction industry do the highly strenuous job of rock and brick crushing and carrying head loads up improvised ladders. Apart from postural defects, backache and muscular pains due to physical factors and fatigue, the tropical heat could also lead to trauma, cramps, exhaustion and strokes. (Department of Science and Technology, 1984, pg. 5).

### Emotional Health

Apart from work outside the house, the women also perform their normal domestic labour. Cooking continues to be an exclusive responsibility of the women. Besides, looking after the children and even purchasing domestic provisions is treated as their responsibility. As a result, they are burdened heavily with both domestic work and wage earning work. Despite this, they do not have a voice in the decisions affecting the family. Around 50 per cent of the respondents, however, said that they



had some voice on matters like the daily expenditure.

The major part of the income of the women goes towards the purchase of daily food, just as a part of the man's income invariably goes towards purchase of liquor or tobacco. Around 30 per cent of the respondents reported that husbands beat their wives while they were drunk. Most of the respondents, however, said that such quarrels were soon followed by reconciliation - the men making false promises and the women meekly surrendering. (Manohar, 1983).

Most of the women workers in Madras were either divorced or separated. "What do they (the husbands) care? If they feel like it, they live with other women. But we have to support our children". The others, though married, were either sole-supporters or main-supporters of their families. (Mallika, 1985).

According to the recent Bombay study, there was a sense of isolation; their lives were circumscribed by the construction sites and this was enforced by the mukaddams. Even for their daily needs, they only went to the vendors who set up stalls close by. (Mobile Creches, 1987).

According to an earlier study of the Mobile Creches, most of the construction workers are "migrant" in two senses, not only are they uprooted villagers shuttling uneasily between town and village, but within the city too, they are transients constantly on the move. (Swaminathan and Singh, 1985).

### Employment Guarantee Scheme Work

In a study commissioned by the Health Task Force, in a chronically drought-prone area in Maharashtra, it was revealed that the major source of income for women was in the EGS work, while most men worked on private schemes. This was because, 1) in private employment the wages are Rs.7/- per day for women and Rs.15/- per day for men; while in the EGS, the wages are Rs.7/- for both, 2) in the EGS, people get coupons for 400 gms. of wheat. So children do not go hungry. (Gupte and Borkar, 1987). Though the wages of women were half as much as those of the men, the quantitative findings of the study revealed that in

"20 per cent of the households the women were responsible for the entire monetary income. Another 20 per cent households were supported more than 50 per cent, in terms of money, by the women every month.

It is noteworthy that in spite of women being paid half as much as men are, in the final analysis, they support more than half of the households' monetary income in at least 40 households out of 100. It is important to note that except in one household out of 49 in our sample, there was always an adult male member. (Gupte and Borkar, 1987, pg.65).

The study points out that women here, as elsewhere, participate more than 50 per cent in economically productive labour, almost 100 per cent in socially productive labour at home, and 100 per cent in reproductive labour. It is obvious that women's labour is responsible for the entire economic development of the area, especially considering the fact that women constitute 70 per cent of the work force in EGS work in this country. Yet, women have absolutely no say in the allocation of resources.



As in most other occupations in which women are involved, here too, it is difficult to "prove the etiological relation of women's wage earning occupation to their general physical and mental condition. Often women present very general symptoms which are more a reflection of drudgery and poverty". (Gupte and Borkar, 1987, pg.69).

The major health problems related to their work were stomachache, joint aches, shoulder joints pain (more with older women), severe body ache due to fatigue, cramps in feet, weakness, giddiness, migraines, blinding headaches due to constant exposure to the sun, back ache (mainly low back-waist pain), so much so that "we can't sit on the floor and touch our backs to the floor", injuries due to outdoor work on nulla bunding and fuel collection, scorpion bites. A large number of women complained of leucorrhoea. Many attributed leucorrhoea and backache to sterilisation. On an average, there are one or two cases of injury per month on the site, according to the mukaddam.

All the women work during pregnancy, often until the last week or day. They returned to EGS work one or two months after the delivery. "In our village, since land is not irrigated, there is no income for women except EGS. Our life is spent, digging, lifting, carrying and dumping mud. Is there a choice for any of us even if our health and babies are affected?!" Not a single woman had received any maternity benefits. In fact, only a few months earlier at the EGS site, a four months pregnant woman (her first conception) had suddenly got cramps in her abdomen while lifting a head load of mud. She was taken home and she

aborted. She was back to work within a few days. The doctor who attended to her said, "You lift loads. All else was fine. Work caused the miscarriage!" (Gupte and Borkar, 1987,pg.67).

According to the mukaddam, "If a woman delivers while attending work, then she is entitled to be paid maternity leave for 15 days. Not if she delivers at home or after work hours! There are no creche facilities at the EGS site. The 'reason' for the absence of a creche was circular. There is no creche because there is no dai because women don't bring children because there is no dai because.... At the EGS sites, water was available. Sheds were also built for the workers. But usually men slept in the sheds and women sat under the sun.

The harmful practice, still prevalent in the area, of giving opium to children so that they sleep well may be related to the lack of day-care facilities for the children when the elders go out to work. (Gupte and Borkar, 1987,pg.113).

The problems related to mental health were problems of sterility and post-tubectomy health problems, especially those done during the emergency. In Pondhe village, 2 women had to undergo hysterectomies after tubectomy and in Mavdi village 8 to 10 women had to do so. These had to be done in private clinics and each of them had to spend Rs.2,000 to Rs.4,000. Bigamy was very common-one in every 7th or 8th household. The main reasons were sterility of the wife or the whim of the husband.



Another problem the women faced, was the alcoholism of the men folk. Wife-beating was also common and was independant of the consumption of alcohol by the husband. The women were tired of having to deal with drunken husbands after a hard day's work at the EGS site, in the farm or at home, but they had no other choice, but to bear it.

According to the mukaddam of the EGS site, "Especially in Pondhe village, illness is a big problem. The patient has to be put into a cloth 'doli' and carried down the mountains to a private practitioner. Otherwise they have to walk 7 kilometres to the Malshiras PHC. Pondhe is so inaccessible that even daughters, who are married outside the village cannot come here for years together. How can they walk up the lonely hill range along with little children?" (Gupte and Borkar, 1987, pg.79).

Thus most of the women in the area deliver at home, because they have no other choice. Thus the incidence of child mortality is high.

Our data has revealed that a woman pays a high personal price for the loss of each child that she has borne. Besides the agony, guilt and the feeling of utter helplessness, she has to produce another child to replace the dead one. Even our small sample has clearly shown a relationship between death of children and the number of live births that a woman has undergone. When all the children survived, we found the modal value of live births per woman to be two. When one child died, she had four live births. In fact, every dead child meant the added responsibility of two more live births upon the woman. (Gupte, and Borkar, 1987, pg.189).

### Brick-work

Brick making is a major cottage industry in Kerala, involving making and baking or firing hand-moulded bricks. About 1,20,000 workers are engaged in making hand moulded bricks in the state.

Since no kiln employs more than 20 persons at any one time, the whole industry belongs to the unorganised sector. Brick making is, therefore, considered a cottage industry. The workers, female as well as male, do not belong to any trade union, but, women are the more exploited ones. They hang on to their job however, because of (a) the uncertainty of work opportunity elsewhere, say in construction and (b) the continuity brick work offers in terms of employment. (Gulati, 1981, pg.41).

In the brick industry there is a very rigid compartmentalisation of work on the basis of sex. Women are used here exclusively for the unskilled job of carrying head loads. If they are not carrying bricks they are carrying clay, but they do not have access to any of the other jobs, such as moulding, shaping, stacking and arranging in the kiln. These are all exclusively male jobs. Moreover, as we shall see, all these other jobs carry much higher wages, some nearly twice as much as women get for the load carrying jobs they do. The work that men do is also more interesting without always being physically more exhausting. (Gulati, 1981, pg.40-41).

The task of transporting clay to the kiln site is delegated to women workers. Moving a mound of clay carries



a wage of Rs.12/- in Kerala, irrespective of the distance, and the number of women working on the job.

An adult women carries 20 bricks at a time. She herself has to stack the bricks on the plank on her head while standing. The technique of doing it, is first to stack the bricks, two at a time, starting from the centre of the plank, and then to place one brick each time, on either side of this pile. Once twenty bricks are stacked in this fashion, she starts walking with a swinging rhythm, supporting the bricks with one hand and using the other hand for balance. She has to walk fast, virtually run, in order to dispose off the load quickly. When she reaches the brick kiln, a man will be standing there to receive and stack the bricks she carries. He cannot help her unload the bricks as she would lose the balance. The danger is two-fold; the bricks may fall and break, or she may sprain her neck in the process. Actually, the main brunt of this weight-carrying falls on her neck. She unloads the bricks herself, two at a time from the sides, handing them over to the waiting man. Thus, the whole operation of loading, transporting and unloading falls on her. The man helps her only at the final stage. For this work, the women usually get Rs.5/- per day. The wage depends on both, the distance covered and the number of bricks carried in the course of the day. (Gulati, 1981, pg.39 and 40).

The mistry in the moulding team makes the highest piece-rate wage of around Rs.12/- a day, his two helpers come next with Rs.10/- a day. The kneading of the clay, though strenuous, does not carry high wages. The men engaged

in kneading make Rs.9/- per day. The men engaged in stacking bricks at the kiln make more than Rs.10/- a day. As for the women who only cart bricks or clay, they never make more than Rs.5/- a day. (Gulati,1981,pg.43 and 44).

In the profile of Jayamma, a female brick worker, she had worked till the last day of her several confinements. She delivered all her children at home, with the help of a mid-wife and her aunts. She stayed at home after the deliveries for only a month and got back to work leaving the baby either at the neighbour's or with a relative. As her children grew up, she decided against sending them to school and started taking them with her for work. Jayamma fell ill and felt very weak. She felt that the work at the kiln was too hard. Her body ached for rest. As she grows older and weaker, she ~~is~~ able to carry less and less bricks in a day, so her daily earnings decline.

Jayamma eats more of tapioca than rice, eats only the left over of fish and has, as a result, a shortfall in caloric intake on both, the days she is working and the days she is not, but the shortfall is greater when she is not working. "This is the only way I can provide for our old age", she says. (Gulati,1981).

In the brick kilns at Bombay, the situation regarding the conditions of work are almost the same, but the methods of recruitment and systems of payment seem even more exploitative. In Bombay, the contractors of the brick-kilns



go to drought-prone villages in Gujarat and give "advances" to the poor Adivasis there and on the basis of those advances, make them work for months on the kilns. The workers work on a piece-rate basis. Each trip, from the pile of bricks to the truck, carrying 10 bricks each time, gives the women only 2 paise. Thus carrying 1000 bricks over 100 trips, each woman earns only Rs.2/-. The owners often get 30,000 bricks made per day and the profit is about Rs.40 per 1000 bricks. (Ferrao and Chandrashekhar, 1983).

The women workers in the brick kilns in the western part of Tirunelveli district of Kanyakumari listed their problems as follows:

1. Exploitation by owners of brick kiln units.
2. Lack of job security.
3. No fixed or regular wages.
4. Long working hours - 10 and even more.
5. Lack of work during monsoons, when the conditions are miserable and they are forced to become bonded labourers to their masters. There are no alternate ways to survive.
6. Bad health is aggravated due to frequent child-bearing. Children suffer from diseases which affect their physical and mental health. There is no primary health centre in the remote areas, nor any other private clinic. They have no medical leave and have to lose their wages, when ill.
7. Rape and molestation of girls by the owners is common. Girls, who do not agree to sexual exploitation, lose their jobs and the entire family

working in that unit goes jobless. Unfair charges are made by the owners to remove them from their jobs.

8. Workers have no political freedom either. They have to support the party to which the owner belongs. (Build News, 1982).

The Task Force on health visited a brick-kiln outside Jaipur city in Rajasthan. We met 8 women at the site of work and then had a bigger meeting with about 50 women workers in their village. Almost the entire village works at the brick-kilns. The work at the brick-kilns is usually taken up on a piece-rate system by the family as a whole.

One part of the process is the firing and baking of the bricks, which we could not see as it is closed during the rainy season. It is done in the remaining 8 months of the year.

The bhatta is very hot and women do not wear any gloves to put or remove the bricks into or from the bhatta. They use the ends of their sarees or dupattas to handle the hot bricks "as we do when we remove the pots and utensils from the chulla", they said. They showed us the huge blisters on their hands and fingers.

The work of loading and unloading the bricks from the site to the outside and onto the trucks is done by both, men and women, also by the children. The children are not directly employed by the contractors. But since it is piece-work, the help of the children is important



for the parents to finish the given work-load. The women and men stay very far from the brick-kilns. If it is family labour, the man usually has a cycle and the women sit on the cycle double-seat to come to and go back from work. Often the women work on the brick-kilns alone, especially if they are widowed or separated. Then these women walk the distance, which takes them at least an hour and a quarter each way.

The work-load of one day, which the workers indicated to us was a pile about 5 feet high and 10 feet wide, they get Rs.44/- per day. The pile can be loaded and unloaded by at least 4 people. So, on an average, the women get Rs.11/- per day.

They come to work at 4 a.m. and leave by 10.30 - 11 a.m. They come back again at 4.00 p.m. and work up to sundown i.e. 7 p.m. On an average, they work 10 hours a day on the brick-kilns, besides the time taken to go to and back from work.

The women showed us not only their tattered clothes, but also their roughened, cracked and blistered hands. Their feet ache constantly, from going up and down the kilns with a heavy load on their heads. Shoulders, back and neck pains were common. They have constant cough and they throw up dust and mud in the sputum. They suffer from chest pains when they cough.

The women looked old. One of the more vocal among them pointed out that they would be hardly a little over 40, though they looked almost 60. The women said that

they worked till the end of their pregnancy and came back to work, often with their little infant, almost 2 to 3 weeks later. They made a sort of shade with neem sticks dug into the ground and a cloth below and above the child. We also saw an iron contraption which could be converted into a jholi with a cloth tucked in between the iron rods.

The women gave several instances of accidents which had affected the women as well as the children, with bricks falling and severely injuring the women and crushing the child.

Due to the fact that women continue to carry heavy loads, even during the last days of pregnancy, many women suffer from prolapse of the uterus. They talked about:

- 1) having to wear the plastic ring on the uterus to prevent it from having to be removed, and
- 2) having to undergo hysterectomy.

The women not only looked very old, but also extremely weak. The children looked malnourished and wrinkled.

They are not sent to school because "we don't see the point. What will they do after studying for a few years? They will ultimately have to do this work only". We met a young boy working at the brick-kilns who had completed 2 years in college, studying **biology**, but after repeated failures to procure a suitable job, he had given up and was now working at the brick-kilns.

Most of the women deliver at home. Only when there is some problem, do they go to the general hospital in the city (Jaipur).



At the work-site, there is no resting-place, nor any first-aid equipment, though bruises, injuries and accidents are quite common. Water is available a little further on in a well, which has to be drawn up whenever needed.

When asked about visiting doctors/hospitals, the women said that if at all they did visit, it was for the children. Going to the public hospital involved long delays in waiting in the queues. And that meant a loss in their already meagre income. But the most important complaint was that the public hospitals did not ever have the required medicines. So, ultimately the day's wait ended only in getting the doctor's prescription, and the necessary medicine had anyway to be bought from the outside, which "we never do for ourselves. There is not enough money to eat. Who is going to spend it on these medicines?"

### Salt Kiln Work

In the salt-kiln at Uran, Turbhe, Belapur near the city of Bombay, women constitute more than 75 per cent of the workers. There are above 3,000 women working in these kilns. Most of the women belong to the Agari and Koli (Fisher-folk) community. They live in villages close to the kilns. (Baija, 1980).

The work of the women is mainly of making the furrows and covering them first with the mud and then with cow-dung. Women also have to carry the salt for about 1 to 2 forlongs and store it. One load is about 18 to 20 kgs. Women carry these bags on their head and run to and fro in great rush, because only if they carry 20 such loads, do

they get Rs.1.47p. The male workers get a wage of Rs.10/- per day. However, women can get at most Rs.2.50 or Rs.3/- per day, as they cannot carry more than 40 loads a day. This too, they can do only till they are 30-35 years old. After this age, however, they cannot carry this load. (Baija,1980).

Besides, the women get work only in some seasons. In the months of April, May and June, there is a great rush of work, but it lasts, on the whole, for at most 6 to 7 months. However, for 5 to 6 months a year, there is no work. During the season, women are not allowed a weekly off. Women do not get maternity leave.

Women's work begins at 1.00 O'clock in the afternoon. Often women suffer from heat strokes. Women have to rest for some time and go home. They do not get any medical help. The only facility women get, is, drinking water, which also is brought by one of the women workers from her home. (Baija,1980).

Another study of the conditions of salt-workers is from Markkanam in Dindivanam Taluka in South Arcot District in Tamil Nadu. In this area, about 3,000 acres of land is available for salt production, most of which is private land. Licences are issued for 20 to 25 years for a nominal amount. The only instrument of production is one motor pump for filling the salt water into the salt pans. From the preparation of the land for the salt pans, to the loading of the salt bags into trucks, all the work is done manually by workers, who belong to the Harijan, Gounda, Vannier and Nadar communities. About



10,000 people are dependent on employment at the salt pans. The work is seasonal and there is no permanency of employment. (Delhi Forum, undated).

In 1981, the women were getting Rs.2.50 and the men Rs.4/- for ten hours with a small quantity of rice. The workers have to work from 7 a.m. to 5 p.m. Even though, this is more than 8 hours work, a majority of them have to work even after 5 p.m. without overtime allowance. The profit estimated at about Rs.10,000 per acre of land under salt. (Delhi Forum, undated).

The salt collecting workers have to work for more than 14 hours a day. There are no weekly holidays and the workers are not entitled to get their own religious holidays.

The workers work under the hot sun, all day as there are no sheds built for the workers. There are no facilities for drinking water either. A majority of the workers have developed a disease which causes constant bleeding in the legs. Workers on night shifts repeatedly meet with accidents. There are no first aid facilities, nor any compensation or medical leave.

There is no system of muster roll. The workers are denied provident fund and bonus. Besides, in Markkanam, almost everybody starts work with a loan of Rs.100/- or so from the licence holders, as decades of poverty force them to take loans from the licence holders. At the end of each season, while closing the account, the workers have to repay a large amount to the licence holders. Hence,

they are compelled to work under the same licence-holder without any complaint about their working conditions, wages or working hours. (Delhi Forum, undated). This situation has continued for generations, and concrete steps to change it are urgently needed.

### Hand-cart Pullers

In Ahmedabad, Gujarat, there are 11,500 licensed hand-cart pullers and many others who do not have licences. Usually, a man and a woman together pull the load--- coal, timber, grain, heavy steel pipes and machinery from place to place, serving as a cheap means of transport. They belong mostly to the Thakar and Thakarda communities of Gujarat and Marwad tribes from Rajasthan. It is usually a family vocation. (National Institute of Occupational Health, 1978 ).

Their income is irregular and erratic. In 1973, their average daily income was below Rs.3/- for 49 per cent of the women, between Rs.4/- and Rs.8/- for 40 per cent and Rs.9/- and above for 11 per cent. Meagre income and large scale indebtedness were common. 40 per cent of the women were casual labourers relying for work entirely upon the 'mukaddam', who claimed a regular tax between Rs.2/- and Rs.3.50/-. (Committee on the Status of Women in India, 1974, para 5.125). In the recent discussions of the Health Task Force with the women hand-cart pullers in Ahmedabad in 1987, the situation was very much the same. Their average earnings had risen to about Rs.10/- per day, but they felt that their real earnings in terms of the commodities they can buy with their earnings had reduced substantially.



## Health

The main health complaints of the hand-cart pullers were, severe bodyache, especially the hips, back and shoulders; extreme fatigue and exhaustion. (National Institute of Occupational Health, 1978). Medical examination of the hand-cart pullers in Madras indicated that they suffered from tuberculosis and liver problems. (Oza, 1977). Besides, the handle of the cart while pushing, causes constant friction on the lower part of the abdomen (hypogastric region) in women, leading to the thickening of the skin. Their palms too get thickened due to the constant pushing operation. Many women also complained of menstrual trouble and repeated abortions, which might be due to the constant friction of the handle of the cart over their hypogastric region as well as due to the extreme physical strain involved in the occupation. (National Institute of Occupational Health, 1978 ).

## Tanning and Leather Manufacture

This is a manual occupation especially in the rural areas. Workers are exposed to chemical hazards of calcium hydroxide, dermatitis, chronic bronchitis, anthrax, infections and accidents. (Department of Science and Technology, 1984, pg.9).

## Head-loading

While carrying heavy loads of fuel, fodder and water is an important and inevitable survival task of the majority of women in this country, carrying loads of fuel, foodgrains, vegetables, coal, metal and other

commodities is an occupation of thousands and thousands of poor, labouring women.

A study of 170 households spread across nine villages indicated that "headloading has emerged as an important profession only over the last 15 to 18 years". (Centre for Science and Environment, 1985, pg.189). More than a fifth of the households list headloading as their major occupation; in some villages it is as high as 40 per cent.

The Ranchi firewood sellers, mainly tribal women, usually begin their day at 2 a.m., because they must complete household chores before setting out on the 8 kilometre to 10 kilometre walk to the surrounding forests to collect wood. Seven or eight years ago, the forests were just a kilometre or two away.

To reach the market early, the women must leave their villages, the previous evening by train or bus and spend the night at the railway station or some other public place. Each woman can carry, at best, a 20 kg. headload, which sells for Rs.5.50 to Rs.6.50. About a third of this money is lost in bribes to the forest guards and train conductors. (Centre for Science and Environment, 1985, pg.189).

The back breaking work of cutting and selling wood and the poor nutrition undermines their health considerably. "Women fainting at the Ranchi station is not an uncommon sight". (Centre for Science and Environment, 1985, pg.189).

Collecting firewood is an hazardous occupation. The study by the Self Employed Women's Association (SEWA) of the Girnar forests in Junagadh, Gujarat, revealed that as



many as 58 per cent of the women are hurt by their axes while cutting wood. They are not provided with any medical facilities. Any illness is a major calamity due to their already malnourished bodies. Their children are often left on their own and have to cook for themselves if there are no leftovers from the previous day. Harassment from State authorities - bribes, fines, confiscation of their implements, are almost an inevitable hazard of their occupation.(CSE,1985).

Mahabaleshwar, a hill station in Maharashtra, has a similar story to tell about women head-loaders. They also face constant harassment from the State authorities, often making it impossible for them to earn their living. The Forest Department and the police have refused to let them collect the wood for fuel, have confiscated their implements and also fined them heavily. (Manohar,1987).

The women get up early, at dawn, and after a cup of tea, go off to the jungle to collect the fuel. They do not carry food with them, as there is no drinking water available in the jungle. Very often, in the jungle, the branches and thorns from the trees cut into the bodies of the women and they are deeply wounded or at least scratched. After a great deal of labour, the women collect the wood-fuel, but outside the jungle, the police and forest-guards come and snatch it away. The women have been very badly manhandled and abused. But, as there is no other industry in the area, the women are forced to collect wood-fuel to sell, in order to feed their children. (Manohar, 1987).

Studies and reports from various other states like Andhra Pradesh, Kerala and Tamil Nadu are not very different. According to one estimate, there may be at least 2 million to 3 million people headloading today, "making headloading India's biggest source of employment in the energy sector." (CSE, 1986, pg. 189).

Hamal women are also head-loaders of various kinds of goods. The women working in the central wholesale foodgrains and groceries market in the city of Pune, Maharashtra, usually come to the market at about 9 a.m. and stay there till 7 p.m. Most are casual workers and wait till some shopkeeper or customer calls them for some task. The amount of work they secure, varies from day to day and the work is slack during the rainy season. There is no shelter for the women from either sun or rain. The major problem for the women is the uncertainty of work and the meagre earnings which vary from Rs. 1.50 to Rs. 3/- per day. (Bramhe, 1980). Women have often to carry weights upto 30 kgs. at a time and work upto 10 hours a day.

At the central vegetable and fruit market in Pune, the market stalls are damp.

Continual work in this dampness affects the health of the women. Most of them suffer from fever or chronic pains. They cannot go to the doctor because that would mean losing the day's earnings, and they cannot afford even the nominal fee charged by the government hospital. (Bramhe, 1980, pg. 54).

The conditions in the timber market in Pune are worse.



There is considerable unemployment. Much of the day is spent in waiting for work. There is no shelter for them or their children. The work, too, is physically tougher. The women who pull handcarts usually work in pairs and the weights they carry are quite heavy. They have to go on working, ignoring ill health; the rate of infant mortality and miscarriage is high.

Sitting in the open, the women are often harassed by drunken men. They live in conditions of extreme poverty and destitution. Alcoholism is widespread among men. (Brambe, 1980, pg.54).

In the dimly lit godowns of the gur market, rats scurry along the floor, wasps bite, the hands swell up and the skin burns. In the metal market at Pune, there is danger of injury and of catching tetanus. There are no first aid facilities either. In the grain market and the chillies market, the air is thick with the dust which pollutes the air and causes TB and other diseases. (Sonalkar, 1983).

At the railway goods yard in the city of Pune, women are employed to unload coal. They have to remain in the yard from 9 a.m. to 5 p.m., waiting for the wagons to arrive. Sometimes the wagons arrive late, and they may have to work till 10 to 11 p.m. Some women have to climb on to the wagons and shovel the coal down on the ground; others stand down and fill it into gunny-bags, while the rest of the women stitch up the sacks and carry them away. The wagons are dark inside; there are rats running around and the work of unloading stirs up a lot of coal-dust.

Thus, many women have an opaque film over the pupils of their eyes. The environment is extremely unhealthy, especially in summer and the monsoons. One woman's child was crushed to death in the yard when a weight fell on him. (Bramhe, undated). Earnings vary widely from day to day. They often have to spend a week to a fortnight without any waiting for work.

Many tribal women of Singbhum district, Bihar, are engaged in loading and unloading iron ore at the railway sidings. They have to work for 14 hours or more every day, throughout the year, for a mere Rs.15/- per day. In case of breakdown of trucks, midway, the women are denied their daily earnings as they have no security of jobs. Most of the women handling minerals like iron ore, lime and china clay, with their bare hands, also suffer from lung congestion. The women are not registered according to the Mines Act, which means neither security of employment, nor any guarantee of minimum wages, or health care. (Indian Express, 1987).



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### CHAPTER III

#### HOME-BASED WORKERS

Women participate in social production, both in the production of goods and services for sale, and also within the household, performing domestic functions which are an essential part of social production. The growth of industrialisation has seen a split in these two aspects of the economic spheres of women - the home is the private sphere in which the work primarily is related to the maintenance of the family members, and an outside, public sphere, where labour is performed for a wage. (Rohini P.H. et al, 1983).

However, in India as elsewhere, in the separation between wage-work and domestic labour, there exists a vast and significant sector of the economy, where the home, the site of household labour, coincides with the site of wage work. This arrangement confines women to work that is not very different from housework. Hence different skill usage is neither needed nor developed. It perpetuates the sexual division of labour with the less paying, more monotonous and often hazardous jobs, going to women.

Homeworkers are one of the most exploited groups in the workforce. They receive low wages, work long hours, receive no protection against unfair conditions, dismissals or health hazards. They have to provide their own facilities for work - work space/area, equipment and also meet infrastructural and support material costs such as oil for papads or electricity. At the same time, they are at risk from a number of health and safety problems associated with their work. (London Houseworking Campaign and Women and Work Hazards Group, undated).

The performing of the hazardous jobs at home, have added implications. Pounding of masalas, rolling agar-battis or beedis, have hazardous effects on the women doing the work as well as on the children and other family members in the house. Their children too are exposed to these- often, as they too are made to work, apart from the fact of their mere presence in her 'work-area'.

Also, though it is true that housework too is productive and socially useful labour, the actual material and organisational conditions under which it takes place, generally leaves the woman an isolated individual, with little opportunity for relating with a wider network of social relations. This is also true of other home-based economic activities.

Often, it is women who 'prefer' or 'choose' home-working. It can be combined with her 'primary' work---housework and child-care, and it has the seeming advantage of flexibility of working hours.

However, this 'choice' too, is in a no-choice situation. Women have no choice in today's society but to gear their life around house-work and child-care. These are the responsibilities of women, by virtue, not of their interest, aptitude or choice alone, but by virtue of having been born a woman in a male-defined and dominated society. After having the basic role defined for her, there is little choice left, but for women to 'choose' situations and work-areas that make life a little less draining and strenuous. Flexibility of timing is more than



compensated by the extremely intensive nature of work that most homeworking requires, the stealing and snatching of every bit of leisure and free time, women have. But when has women's time ever been considered important and significant ? As reported by a man on the visit of the Commission members to the home of a worker who made match-boxes, "she works in her 'leisure' time" It sharply emphasised the combination of the vital roles.

Like many other women, home-workers have two jobs--their paid work and their unpaid child-care and housework duties. Domestic chores, on top of long working hours, can result in exhaustion, and a higher risk of infection and stress related diseases. Housework, too contains dangers, such as, noise and dust from machines, and chemicals contained in detergents and cleaning agents.

Wage work and domestic duties, tie homeworkers to the house with few outside contacts. This social isolation can contribute to depression (World Health Organisation, 1986), and added to long hours of routine work-tasks that give little satisfaction, homework is also work that produces stress. (London Home-working Campaign and Women and Work Hazards Group, undated).

### Stress and home-based work

Stress is a major cause of work related illness, and is both biological and psychological, and although we know much more about the biological changes in stress, as the body attempts to deal with outside threats, the psychological experiences of stress and anxiety are just as

important. Biological stress-responses cause wear and tear of nearly every organ of the body, and it both results from, and causes disease. Stress may be caused by and may cause ulcers, heart disease, and blood pressure. Job satisfaction, feelings of self esteem, a decent wage are important protectors against stress. All aspects of home-based work, wages, monotonous and unrewarding work, lack of security, and isolated and sometimes crowded working conditions, combine to make home-based workers vulnerable to stress and stress related diseases.

Women who work in their residence, in the informal sector, fall into three broad categories, though these are not mutually exclusive:

1. Women who work to produce and maintain the family on a day-to-day basis, through their labour in housework, child-care etc., through their emotional sustenance,, their sexual labour, their cultural socialisation of children. These women are often termed as 'housewives'. In today's society, women who work in the home, doing house work or other economic work, as well as women who work outside, are also involved in this labour.

2. There are women who take work from the factories --- assembly work, production of handicrafts, bidi-rolling, food-processing. Work here is 'put out' by the company or by subcontractors or even by cooperatives. This in-fact, is a disguised form of the capital-wage labour relationship.

3. Women who work in their homes and are self-employed e.g. women who cater meals, some types of food processing (masalas etc.) or ready-to-eat food stuffs (Papads, pickles etc.).



The major problems of the home-based workers are said to be:

1. Very low returns.
2. No protection.
3. No benefits as workers.
4. Very bad working conditions.
5. Very long and arduous hours of work.
6. Problems of availability of raw materials at reasonable prices.
7. Competition for markets.
8. Lack of space to work.
9. Lack of credit facilities.
10. Limited or no access to new technology for facilitating work and improving it.
11. Lack of facilities for training in skills.
12. Absence of protective legislation.
13. No social security e.g. insurance, health benefits, old age benefits (Jhabwala and Jumani, 1986).
14. Lack of security of the home itself - their 'illegal' shelters are frequently demolished, especially in urban areas.
15. Lack of organisation and complete vulnerability to exploitation. This results in a lack of bargaining power and exploitative relationships with the middlemen or small-time capitalist enterprises as well as large ones.

### Housework

In today's sexual division of labour, women have been regarded as those responsible for all the work

and labour necessary for the upkeep of people in the family, in the home . The concrete details of this work and the labour and effort needed, depend upon the class, caste and situation of the family and the status of the woman within it.

Broadly, this work entails fetching water, fetching firewood, burning the firewood and lighting the chulha, washing utensils, washing clothes, grinding corn, cooking, giving birth to children, taking care of them every day and in times of illness.

Each of these tasks, especially in remote or drought-prone areas (i.e. the majority of rural areas), requires long hours and strenuous efforts, besides being extremely hazardous to health.

According to the Centre for Science and Environment Report,

Latest evidence shows that air pollution within homes may be an acute problem, an underlying cause of millions of deaths every year. The burning of cooking fuel envelops the indoor environment with heavy smoke and women who have to do all the cooking, may be daily exposed to more pollutants, than even industrial workers in extremely polluted environments on extremely polluted days.....As firewood becomes scarce, they have to put in more energy to collect fuel and then they have to face the dangers of wood smoke everyday. (Agarwal, 1985).

Over 90 per cent of households use wood, dung, crop residues as fuels. Especially during winter, but also at other times, when a temperature inversion prevents the smoke from rising, houses are filled with smoke.



In another study carried out in 1981, in 36 households in Anand district, in South Gujarat, it was found that, the woman cooking in each household was made to wear a sophisticated air sampler, which was clamped to the collar, so that the measurement device could move around with the cook and measure her actual exposure. Exposures to two major pollutants of wood smoke, total suspended particulates (TSP) and benzo (a) pyrene (BaP) were measured. (Agarwal, 1985).

The results were shocking. The average exposure of women to TSP in their cooking period ranged from 1,110 to as high as 56,600 and averaged about 7,000 microgrammes per cubic metre ( $\mu\text{g}/\text{cum}$ ), as compared to 260  $\mu\text{g}/\text{cum}$  (for 24 hours) recommended in the US and 120  $\mu\text{g}/\text{cum}$  to 150  $\mu\text{g}/\text{cum}$  recommended by WHO. The proposed eight hours Indian standard for industrial areas is 500  $\mu\text{g}/\text{cum}$  and 0.1  $\mu\text{g}/\text{cum}$  for sensitive areas. Concentrations of TSP are less relevant than concentrations of particles which have sizes that can be inhaled, less than three millionths of a metre. (Agarwal, 1985).

These estimates show that both the doses and concentrations being experienced in village homes, burning biomass fuels, are extremely high by all standards. They show that cooks receive a larger total dose than a resident of the "dirtiest urban environment", and receive much higher dose than the WHO's recommended level or any national public standard.

Table 3.1  
ESTIMATED ANNUAL DOSES OF RESPIRABLE  
SUSPENDED PARTICULATES  
(milligrammes per individual)

	Milligrammes
Gujarat Villages:	
Cook	21,000
Non-cook	3,700
Traffic Police in Ahmedabad	2,600
Ahmedabad City	2,100
Delhi	1,400
Bombay	1,100
WHO recommended level	210

Source: Kirk Smith, East West Centre (quoted in  
Agarwal, 1987).

Dwellings in villages are small and badly ventilated. But in one of the Gujarat households, when the holes in the roof were closed, as is done regularly during the monsoon, ventilation was so reduced that it became impossible for the researchers to remain in the kitchen for more than a few seconds because of the discomfort caused by the heavy smoke. The woman however, stated that such conditions were normal during the monsoon. The exposures increased manifold and were among the highest recorded anywhere in the world.

What does this mean for the health of women who cook? The most powerful evidence for the ill-effects of wood smoke comes from a survey of a heart disease called cor pulmonale, in which the right lower chamber of the heart enlarges and fails because of a disorder in the lungs. The survey was carried out over a period of 15 years on hospital patients in Delhi.



It found that there was a surprising similarity in the incidence of cor pulmonale between men and women, even though 75 per cent of men were smokers of tobacco, as compared to 10 per cent of women. In addition, the age of onset of cor pulmonale in Delhi was much lower for women. Bronchitis and emphysema--abnormal distension of the lungs with air--were the main lung diseases diagnosed, in both sexes.

Nearly all the women were from the lowest income group. While all the women patients cooked, only 7 per cent of the men claimed that they cooked. The cooking fuels used were mainly of dung (63 per cent), wood (25 per cent) and coal (12 per cent).

The authors, Dr.S.Padmavati and Dr.S.Arora, concluded: Cigarette smoking is prevalent all over India and must be a contributory cause of bronchitis in men, but not in women, as only 10 per cent of them smoke cigarettes. The women are, however, exposed to smoky primitive fireplaces from childhood. They gave a shorter history of cough and expectoration (coughing up from lungs and air passages); the onset of cor pulmonale was 10 to 15 years earlier and they showed more severe congestive heart failure, greater cardiac (heart) enlargement and greater derangement of pulmonary (lung) function with a several loss of exercise tolerance.....

There is a growing body of evidence that points to a strong link between chronic CO exposures and both heart disease and impaired foetal development. While CO has not itself been found to be carcinogenic, there is concern that it may act to increase the carcinogenic effects of other air pollutants by inhibiting the ability of the lungs to clear themselves.

Any condition which results in reducing the blood's capability to carry oxygen to the tissues, like anaemia, will also make a person more susceptible to carbon monoxide toxicity. This is particularly bad for Indian women who are anaemic in large numbers. It is estimated that in India 40 per cent to 60 per cent of preschool children,

25 per cent to 30 per cent of women in the reproductive age and almost 50 per cent of pregnant women in the third trimester (more than 24 weeks of pregnancy) are anaemic. Chronic lung diseases will further reduce the capability of the blood to rid itself of carbon monoxide during periods of low or no exposure. (Agarwal, 1987, p.20).

Several factors make women particularly susceptible to CO exposure. Women generally have less haemoglobin reserve than men, which makes them more prone to anaemia, and this, in turn also makes them more vulnerable to lower doses of CO than men. During pregnancy, there is an additional demand on haemoglobin, further lowering their reserves and making them more sensitive to CO. This exposure can also affect the unborn child leading to reduced birth weight and increased perinatal death rates (that is, death at birth or in the first week of life). It is a matter of grave concern that respiratory diseases are a leading cause of death among girls and women over the age of five, in India. (Agarwal, 1985).

Formaldehyde, another pollutant in smoke, causes irritation in the eyes, nose and throat. Irritation begins at 0.1 parts per million (ppm) to 1.0 ppm. Some people can become adapted to 2 ppm to 3 ppm, for as long as eight hours without undue discomfort. But above 5 ppm, most people are extremely uncomfortable and remain so, for an hour or more after the end of exposure. Formaldehyde is poisonous to tissues in the lungs and exacerbates skin wounds. It is considered a human carcinogen and there is evidence that aldehydes and BaP can act synergistically to hasten tumour growth in animals. Studies on the effects of smoking,



also indicate the kind of impact that wood smoke may have on the health of women. The longer the history of cigarette smoking, the higher the risk. Women begin cooking as young girls and continue for much of their lives. Young girls may receive significant exposure at their mother's side even before the often tender age at which they begin cooking full-time. (Agarwal, 1987)

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Estimated annual doses of Benzo(a)-pyrene -----	(Microgrammes per Individual)--
Gujarati villages (cooking only)	4,200
Ahmedabad kitchens (cooking only)	6,100
Traffic Police Station (Ahmedabad)	480
Ahmedabad City (Polluted areas)	180
Proposed USSR ambient standard	3.5

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(Source: Kirk Smith, East West Centre, quoted in  
Agarwal, 1987 p.21 ).

A report on a community bio-gas plant concluded that smoke is also responsible for a number of eye diseases, especially among rural women. More than 70 per cent of the respondents claimed that, the frequency of eye diseases had decreased after they had stopped using biomass fuel. Besides, "women have to spend a large proportion of their time in preparing dung cakes, collecting and burning firewood, cleaning blackened utensils, grinding flour and cleaning soot from the ceilings of their houses." (State Planning Institute, undated).

According to the paper prepared for the Department of Science and Technology(DST),cleaning of utensils and washing of clothes result in skin reaction and systemic toxicity of various products especially in hot climate and often due to poor quality and less quantity of water (DST,1983).

Diseases caused by housework include skin diseases, particularly eczema, chronic paronychia, rheumatic complaints and psychosomatic disorders. Forms of bursitis and tenosynovitis, such as "housemaid's knee", and lumbago or back pain are relatively common (International Labour Organisation (ILO),1983).

Occupational accidents are, however, more frequent than occupational diseases. (ILO,1983). Small cuts and abrasions are common. More serious accidents also do take place. Though there has been little research on this situation in this country, research in other countries indicates that "considering all classes of accidents, most non-fatal injuries in North America, occur in the home and in the domestic surroundings. In the United Kingdom, more than a million persons are affected annually by home accidents. In the United States there are around 24,000 fatalities a year due to home accidents". (ILO,1983, pg.28).

In a country like India, the incidence of burn accidents involving women is very high. Ground level or low level cooking, as well as open fire and primus stove seem to be important immediate agents of the burn accidents. In a study of burn cases at a hospital in Chichwad, Maharashtra, it was found that, out of the 48 burn cases in one year and five months, 54.15 per cent of the accidents affected women



and 45.83 per cent (i.e. 22 cases) affected men. Out of the 45.83 per cent, 6 cases related to the burns which resulted during rescuing the women. (Vaidya and Naik, undated) Thus women were mainly involved in domestic burn accidents.

Out of 48 cases, in 16 (i.e. 33.33 per cent) the aetiological agent was the stove, in 14 (29.16 per cent), it was the chimney. In more than 52 per cent of the total burn cases, the "cause" of the accident is related to the cooking (stove) and lighting (chimney) arrangement that women in poor families have to resort to for lack of better facilities, like the LPG cylinder and electricity.

The work of fetching water, fuel and fodder, though the responsibility of the woman at home, is discussed separately under agriculture and manual work.

### Beedi-rolling

Beedi-rolling is one of the relatively most well-researched industry, in terms of the conditions of work and the health conditions of its direct and indirect workforce. The beedi industry is one of the country's oldest industries with a total of 2 million labour force, comprising of both men and women.

According to the 1961 census, out of 9 lakh beedi workers, 5.5 lakh belonged to the household sector. "The beedi and cigarette industry, where the employment of women exceeds that of men (77.3 per cent in Andhra Pradesh, 60.9 per cent in Maharashtra), is the worst of the sweated industries". (Committee on the Status of Women in India, 1974)

In places like Ahmednagar city, there are three main systems of 'employment' in the beedi industry, factory-based, out work 'pass-book' system and the contract system. The industry follows a familiar pattern, with high caste people and men working in the factories and the majority of lower caste people and women and children working at home on a contract or piece-rate basis. (Morje, 1983; Acharya and Saldanha, 1984). Hence, the beedi-worker is included among the home-based workers.

### Work-process

The process of beedi-making is highly labour intensive. The tools used are a pair of common scissors to cut tendu leaves, a cardboard cutout for giving the beedis the right shape and size, and a simple wooden fork for folding in the two ends of the rolled beedis.

Beedi-making is a skilled job. Beedis are made of processed tobacco wrapped in tendu leaf. The leaves are moistened by soaking them in water overnight. The wet leaves are then cut into pieces, roughly rectangular in shape, depending on the length of the beedi. The processed tobacco, in a powdered form, is thoroughly mixed by hand. The tobacco is then rolled on a piece of tendu leaf. The edges of the leaf around the two openings are tucked in, to prevent loss of the tobacco. A thread is then tied around it, towards the narrower end to maintain the shape of a beedi. Twentyfive beedis are bundled together and the bundles are supplied to the contractors. (National Institute of Occupational Health, 1984, p.79).



### Living and working conditions

A majority of the beedi workers belong to a lower socio-economic group. The occupational stresses associated with long hours of work, continuous sitting work posture, exposure to tobacco and poor physical working conditions, are superimposed on the handicaps of poor socio-economic and nutritional status.

Taking the poverty line for the rural population as Rs.51/- per capita per month, 75 per cent of the workers interviewed in the Allahabad district in Uttar Pradesh, were below the poverty line. This is a high percentage compared with the prevailing estimates for the country as a whole, which vary between 40 and 60 per cent. The difference is large enough to infer that those engaged in beedi making belong, on the whole, to the poorer segments of the rural population."(Bhatty, 1985).

A majority of families in the Uttar Pradesh survey were Muslim. Women of these families had no alternative employment opportunities. They shared the beedi making and the domestic work, with the children of the family. (Bhatty, 1985).

In Allahabad, there are about 2 to 3 million people working in the beedi industry. "Nearly 90 per cent of these, are women, mostly working in their homes on a piece-rate basis with raw materials, being supplied by the contractor. Women's contribution to household income is substantial, about 46 per cent. Most women work about 11 hours a day, of which beedi-making takes 6.9 hours and domestic work 4.2 hours." (Bhatty, 1985).

In the state of Madhya Pradesh, there are about 54 lakh beedi-workers. "Today, a large number of beedi workers here face conditions of near starvation. There is not enough work for them. A beedi worker is lucky if he/she gets three days' work in a week. Many are consequently ready to work at a rate lower than the established one". For every 1,000 bidis rolled, the workers get a mere Rs.4, if in a rural area; Rs.4.75 in a semi-urban area and Rs.5.50 in an urban areas.(Chawdhury, 1980). In the Yeola and Sinnar talukas of Maharashtra, 81 per cent of the beedi-workers were found to be below the poverty line (Acharya and Saldanha, 1984).

The visit of the Commission members to Madhya Pradesh confirmed the problems. The workers are exploited by middle men. Poverty forces them into this poorly paid occupation, but it does not raise even their nutritional standards, leave alone others. Although the government minimum wages is Rs.12.50, most of them earned only Rs.5/- to Rs.7/-, as deductions were made on pretext of badly-made beedis and the middleman's commission. Rarely a woman had an identity card to benefit from the Beedi and Cigar Workers' Act. The medical facilities were too far away to be of any benefit to them. One of the problems which the State Government officials in Bhopal, Madhya Pradesh, underlined was that, the employers migrate the beedi-rolling work from one state to the other adjoining states where the Minimum Wages Act is not strictly implemented.

In Pune, the National Commission learnt that though the government rate per thousand beedis was Rs.15/-, the



net wages came down to Rs.8 to Rs.9, as the quality of the beedi leaf was not good and often beedis were not approved. There were no facilities for children's scholarships, no maternity benefits, no housing schemes, no medical centres, no creches. The law relating to beedi workers was not being implemented. In Vellore, in the state of Tamil Nadu, most of the beedi-workers have been working in the industry for more than 15 to 20 years without any break. As in other parts of the country, they do not get any paid leave, sickness benefit, bonus or minimum wages. They do not get any regular work either. Some of them get work only three days a week. Nobody gets work for more than four days a week. Their work depends on the supply of raw materials, and income depends on the number of beedis rolled or labelled. They are tightly controlled by the employers or contractors, who may refuse to give them work on any day of the week. (Mehta, 1984).

As has been experienced by women beedi rollers in most parts of the country, even when they are given work, there is not only exploitation through very poor wage-rates, but also super-exploitation, through the faulty raw material given, and the subsequent deductions from the already low wage. Generally, when employers supply the material for 1,500 beedis, the material is not enough and there is a deficit of 300 beedis. The workers have to buy raw materials like tendu leaves and tobacco, to replace the missing material, in order to roll and deliver the required number of 1,500 beedis. Sometimes, women workers employ children to fold leaves, at the rate of Rs.2/- a day. The women's net earning is, therefore, about Rs.4/- on a working day which is 10 to 12 hours long. Their weekly earnings range from Rs.12 to Rs.16/-. (Mehta, 1984).

At Virudhapatti in Tamil Nadu, the women pay 90 paise to someone to cut leaves for 1,000 beedis. They have to purchase the thread themselves. Out of the tobacco supplied, one fourth to half a kilo flies away or is wasted. They have to purchase this at Rs.7/- a kilo. Out of the 1,000 leaves given by the employer, there is usually a deficit of 150 to 200 leaves. They have to buy new leaves at Rs.5/- a kilo. Two members of a family, together, make 2,000 beedis a day. They are paid Rs.7/- per 1,000 beedis. They have material only for 10,000 beedis a week. Their weekly gross earnings are therefore, about Rs.70/-. On an average, they have to spend Rs.12/- a week in replacement of the wasted or poor quality material and towards, forced cuts which the employers impose while paying them for the beedis rolled. Their net earning, therefore, is Rs.58/- a week, that is, about Rs.20/- a person a week. Their daily income comes to Rs.3/- per person.

When asked how the women manage with such low wages, they replied that, they had to mortgage their children to the beedi-employers for years together to be able to borrow and be able to survive. The women beedi-workers in Vellore had a long story of suffering, degradation and bondage to tell about their lives as beedi-workers. (Mehta, 1984).

In Patan, in the state of Gujarat, there are thousand of beedi-workers, most of them Muslim women. Most of the beedi workers work in their own homes; 21 per cent being the sole supporters of the families. They earn Rs.4 to Rs.5 for a thousand beedis, about half of the legal minimum wage. Children help to dry the leaves and roll the beedis. The houses are full of tobacco dust and most women have



respiratory problems. Women work for approximately 10 hours a day and have no identity cards, which would enable them to get some of the benefits under the Beedi and Cigarette Act (1966). Any attempt at unionization has resulted in the victimisation of the active workers. (Jhabwala, 1984).

In Kheda district, in the state of Gujarat, 40,000 of the 50,000 workers in the tobacco industry are women. They work for about 9 to 10 hours making beedis. In violation of the labour laws, the workers are neither given any paid holidays, nor minimum wages. They are not entitled to any provident fund either. The rate of exploitation of these women may be gauged from the fact that while the cost price for the owner of each package is Rs.400/-, the selling price is Rs.2,500/-. (Patel, 1984).

A survey by the International Labour Organisation, estimated that, about \$450 million (Rs.340 crores) worth of beedis are produced annually, but only about \$160 million go to the beedi worker, as wages. Nevertheless beedi-making is an important source of income for the poorer rural households, because women's earnings from beedi-making constitute, on an average, as much as 45.5 per cent of the total income of the simple households. This indicates the levels of poverty. The ILO study shows that "contractors, who supply the materials for the manufacture of beedis in homes, rarely pay more than the equivalent of half the statutory minimum wage, since this is almost impossible to enforce". (The Statesman, 1980).

The beedi workers' employment, including working conditions, wages and benefits are governed by the Beedi and

Cigarette (Conditions of Employment) Act, 1966, which was upheld by the Supreme Court in January 1974. The Beedi and Cigarette (Conditions of Employment) Act, 1966, provides for a working period of 9 hours a day and 48 hours a week. The workers are entitled to a paid weekly holiday and leave, at the rate of 1 day, for every 20 days work during the preceding year, wages for the leave period at rates equal to overall daily wages during the months immediately preceding the leave and 3 months' maternity leave for women workers. This Act, which was challenged by some firms has been upheld by the Supreme Court in January 1974. Describing the 3 Categories of beedi workers, namely those employed as direct labourers, home workers "mostly women who manufacture beedis in their homes with the assistance of other members of their family, including children" and out-workers, to whom material is supplied by the proprietor himself without the agency of the middleman, Chief Justice A.N. Ray observed:

Under these systems, the contractor engages labourers less than the statutory number, to escape the application of the Factory Act.... Sometimes, there is no definite relationship of master and servant between the actual worker and the ultimate proprietor. The proprietor will not be answerable for the wages of the out-workers, because there is no privity of contract between them. A large body of actual workers are illiterate women, who could with impunity be exploited by the proprietors and contractors... Women and infirm persons can earn something by rolling beedis. The dependence of these people, particularly the women, shows that they have little bargaining power against powerful proprietors and contractors.

The Court also held that the provisions of the Act, including maternity benefits, one month's wages in lieu



of notice, etc., also applied to the home workers. (Committee on the Status of Women in India, 1974).

Various studies referred to here and others, as well as observations and experiences of beedi-workers and organisers have emphasised the non-implementation of the Act. Just a few more examples may be sufficient. The Act remains a dead letter at Sinnar in Maharashtra. The workers get neither a paid weekly holiday, nor a paid annual leave. Women workers do not get any maternity leave and there is absolutely no job security. (Awachat, 1974).

Another study of the beedi workers in Kerala takes into account various aspects, such as, load of work, wage and non-wage benefits, savings and indebtedness and occupational hazards. The study confirms the vulnerable state of beedi workers and the unfortunate fact that a majority of them do not get most of the benefits conferred by the Act.

In Kerala, 77 per cent did not get any medical benefits and 74 per cent did not get any maternity benefits. Sixty-eight per cent of the women workers interviewed in Ahmednagar, Maharashtra, had never heard about the Act, and the remaining had only heard about it! (Mohandas, 1980; and Morje, 1983).

In 1973, the Committee on the Status of Women had visited a small workshop in the house of a contractor in Kurnool, in the state of Andhra Pradesh. The workers were paid at the rate of Rs.2.50 per thousand beedis. The workers complained of frequent deductions in wages on

various pretexts, that the products did not come up to the required standard of quality. The workers consisted of families of men and women and small girls between the ages of 5 and 15. The adults were engaged in rolling and tying the beedis while the children were mainly engaged in folding the tops of the beedi. One 12 year old girl mentioned that she had been doing this for as long as she could remember. All the workers looked undernourished. The children particularly, were extremely small for their age. A few pregnant women said they had to work till the last day of their pregnancy. Working hours were from 6 a.m. to 6 p.m. During these hours, a family of 4 managed to produce about 1 thousand beedis. The employer reported that young boys became restive and were, therefore, not found useful. The girls, however, were prepared to put in the necessary labour for 12 hours a day. (Committee on the Status of Women in India, 1974).

While beedi-rolling is an extremely labour-intensive, back-breaking and strenuous occupation, the women continue to do it, because this, at least, provides them with their meal and a half each day. Thus, while employment training and opportunities for women need to be considerably widened, in the mean time, women will continue to do the beedi rolling. However, in many places, this source of employment itself, is under threat.

For women in Nipani, Maharashtra state, (Datar, 1986) and Kheda, Gujarat state (Patel, 1984) as elsewhere, this threat is real, as two machines had already been installed by 1984. It was feared that, if the trend continued, only 9,000 out of the 50,000 workers in Kheda



would be required. This would render several thousand women destitute. It is urgent that effort-saving but non-labour saving technology alone be granted to the employers and also alternative training and employment facilities and opportunities be created at the earliest.

### Health-status

As is true of women's health status in the other occupations in the informal sector, it is not always possible to isolate the occupational causes from other inter-related factors like living conditions, nutrition, discrimination and lack of opportunities, which directly and indirectly affect women's health. However, some of the studies have disussed the health problems of women beedi workers. Some studies have emphasised women workers' experiences and problems as they have faced them, while others relate to medical examinations and diagnosis.

A study of 31 T.B. affected beedi workers in Ahmednagar indicated two major types of health problems faced by them:

1. T.B., asthma, allergy, continuous cold, are said to be caused by the injurious effect of inhaling tobacco-fumes.
2. Backache, bodyache, stomachache, gas trouble, piles, rheumatic complaints are said to be the consequence of the long hours of sitting in an unhealthy atmosphere doing a monotonous job.

In the Ahmednagar study, 97 per cent of the workers interviewed thought that tobacco-fume was one of the

causes of their TB. "According to Gardener, exposure to fumes and gases could not be proved to favour the development of TB. According to him, standard of living is one of the most significant factors in TB and nutrition has been recognised as fundamental". (Morje, 1983).

According to the Kerala study, lack of ventilation, over-crowding and uncongenial workplace are the major factors. Ninety-five per cent of the respondents in the Kerala study claimed that, the diseases were occupational. (Mohandas, 1980). According to the Sinnar study, more than 50 per cent of the beedi workers eventually die of TB or asthma. (Awachat, 1974).

In the Ahmednagar study, time and money are the major difficulties faced by beedi workers in continuing regular treatment. For poverty-stricken families of beedi workers, going to a hospital for check-up means losing several hours in queues, medical examinations and consequentially, the days' wages. (Morje, 1983).

Overcrowding offers opportunity for infection in TB. Beedi workers face the problems of overcrowding in their factories as well as in their homes. The women workers in Ahmednagar had clearly noted the effect of TB on their working capacity. While 68 per cent could roll 900 to 1,000 beedis per day, and 26 per cent could roll more than 1,000 per day before suffering from TB, only 19 per cent could roll 900 and above after having contracted the disease. All the others could work for far lesser time and do fewer beedis. Continuous hours of sitting and fine finger movements are necessary for the rolling of beedis.



A TB patient tires very soon and pains in the joints decrease the fine finger movements. About 81 per cent of the women workers interviewed in Ahmednagar considered TB as one of the main reasons which hampered their working capacity and 3 per cent felt that mental worries were the main cause. (Morje, 1983). This is a vicious circle, as less working capacity would imply even lesser wages and a further depletion in their accessibility to food and nutrition, an important aspect of the treatment of TB.

When extreme tiredness or coughing did not allow them to work at all, the women workers had to take leave, as continuation of work became impossible. Although the Beedi and Cigar Workers' Act grants leave with wages, the women workers in the Ahmednagar study had never been able to avail of it. The reasons mentioned were, the lack of awareness of such provisions and the fear of being victimised. Eighty-one per cent took leave when it became just impossible to work. They had to lose their wages. Sixteen per cent had not taken any leave, as they could not afford to do so. This was especially true of the sole-earning members. (Morje, 1983).

The women workers in Kheda district (Gujarat) complained of asthma. They also suffered from tuberculosis and cancer. As there were no provisions for spitting, women had to swallow the bitter sputum which made them feel sick and gave them a vomiting sensation. Frequent miscarriages were also reported. (Patel, 1984). Many beedi workers in Bangalore (Karnataka) also suffered from cancer and TB. (Economic Times, 1983).

The study by the National Institute of Occupational Health comments that, the main hazard in the beedi-industry is due to tobacco dust, causing burning of eyes, conjunctivitis, rhinitis, mucosal dryness including of the genital tract, occupational dermatitis, bronchitis, emphysema and dystonic. (National Institute of Occupational Health, 1984).

A detailed medical examination of 101 women beedi rollers was undertaken in the city of Ahmedabad. The majority were found to be clinically anaemic and had complaints of headache, nausea, giddiness etc. Respiratory complaints (cough, cough with expectoration and dyspnoea) were reported by 22 per cent of the women. (National Institute of Occupational Health, 1984).

On the Commission's visit, the women complained of burning sensation in the throat when they had a cough or cold.

The Ahmedabad study revealed the following symptoms among women beedi workers.

Table 3.2  
OCCURRENCE OF SYMPTOMS AMONG WOMEN  
BEEDI WORKERS

Symptoms	No. of Cases
Backache	64
Headache	51
Pain in neck	19
Burning, itching & lacrimation in eyes	15
Pain in chest	10
Respiratory Complaints	22
Giddiness	12
Loss of appetite	5
Nausea	7
Pain in hands and legs	17

Each woman had more than one symptom.

Source: National Institute of Occupational Health, 1984, p.85.



Body weight is often taken as an effective index to evaluate the nutritional status. Of these women, 40 per cent were found to have poor nutritional status as evaluated from Davenport Index (Body weight divided by square of body height).

The survey also reveals that 85 per cent of these workers had 4 or more children. It was also found that 8 per cent of them had abortions and 7 per cent had premature deliveries. Sixteen per cent of these women were in menopausal state. The average age of menopause among these women was found to be  $41 \pm 3$  years.

A large part of their activities was performed in a sitting posture, i.e. sitting on the floor with crossed legs, with right or left leg bent at knee or with legs extended. Prolonged sitting, with forward trunk bent, leads to sustained static contraction of the back muscles. This was evident from the incidence of low back pain among 64 per cent of the women. About 20 per cent of the workers complained of neck pain. The prevalence of back pain was high among the 30 to 39 years age group.

Handling of tobacco for making beedi leads to absorption of nicotine. This was observed from the excretion of nicotine and cotinine in urine. The concentration of nicotine and cotinine as estimated from the 24 hours sample of urine, was found to be  $1.45 \pm 0.21$   $\mu\text{g/ml}$  and  $1.47 \pm 0.18$   $\mu\text{g/ml}$  respectively. (National Institute of Occupational Health, 1984).

In another detailed health study of 500 beedi workers, of whom 71 per cent were women, working at Kamptee, 20 kms. from Nagpur, Maharashtra,

The peak expiratory flow rates (PEFR) of all workers were recorded using Wright's peak-flow meter. All the workers recorded less PEFR values than normal, except 10 males and 2 females.

The workers who were not suffering from any heart or lung disease also had their lung volume impaired. There was a statistically significant difference in impairment of lung volume in those who did not have any heart or lung disease, as compared to those who had. The impairment appeared to be highest in those who had emphysema. There was no significant difference in PEFR in smokers and non-smokers. The chest expansion in 87.4 per cent of workers was less than 4.5 cms. Thus it seems to be the case that, exposure to tobacco dust for long periods causes impairment in lung volume as measured by the peak expiratory flow meter.(Tripathi et al, 1986).

In another study of the same workforce in Kamptee, near Nagpur, clinical examinations were carried out. All the 500 workers were suffering from some morbid conditions or other, ranging from mild to severe illnesses.(Tripathi et al, 1985).

A large number of workers were suffering from multiple illnesses. A total of 19(3.8 per cent) had 1 - 3 illnesses each. One male and four females had single illness each. A majority of males, 79, (54.5 per cent), had 10 to 12 illnesses each. Also a majority of females, 154, (43.4 per cent), had between 10 to 12 illnesses each. The maximum illnesses a worker had, individually, was 14 for male and 15 for female. On an average, a worker had 10.3 illnesses. The average number of illnesses per male and female worker was 9.3 and 10.5 respectively.

Occupational stigmata alone contributed 3.4 conditions for each worker. The other illnesses which were found to be more common were anaemia, 373(74.6 per cent), helminthiasis, 210(42.0 per cent), impacted ceramen, 236, (27.2 per cent), acretion on teeth 328, (65.4 per cent), giddiness, 229(45.8 per cent), insomnia, 110, (22.0 per cent), tremor, 109, (21.8 per cent), peripheral neuritis, 126, (25.2 per cent) and headache, 166, (33.2 per cent).

For the ascertainment of morbidity load, clinical examination and investigations of urine, stool and blood were done. Workers who were under treatment during the study were also included. Most of the defects that were observed could have been prevented, and others could be treated effectively, had they been detected early.

The beedis are rolled between the thumb and fingers in a sitting posture for about 8 hours a day in the factory and for about 3 hours, to cut leaves at home. For years together,



workers have to work in the sitting position, for 11 hours each day. Their sitting posture is such that they have to keep their feet inverted, which brings a lot of pressure on them and subjects them to constant friction. The shoulder joints are elevated and the vertebrae bent forward. The right wrist is put in constant movement. Cutting of leaves by scissors, subjects, the fingers to constant pressure. These activities of the workers resulted in giving rise to a number of conditions which can be labelled as occupational stigmata (Tripathy et al, 1985).

A few occupational stigmata observed during the study are listed below in order of their frequency of occurrence.

Callosities of fingers	481 (96.2%)
Low backache	373 (74.6%)
Callosities of feet	295 (59.0%)
Keratoderma	246 (49.2%)
Stained nails	186 (37.2%)
Pain and stiffness of joints	133 (26.6%)
Sciatica syndrome	6 ( 1.2%)

Table 3.3  
PREVALENCE OF MORBID CONDITIONS WITH RESPECT  
TO SEX

No. of morbidity	Male (145)		Female (355)		Total (500)	
	No.	Percentage	No.	Percentage	No.	Percentage
1 - 3	8	5.5	11	3.1	19	3.8
4 - 6	14	9.6	38	10.7	52	10.4
7 - 9	31	21.4	53	14.9	84	16.8
10 - 12	79	54.5	154	43.4	233	46.6
13 +	13	9.0	99	27.9	112	22.4
Total	145	100.0	355	100.0	500	100.0

(Tripathi et al, 1985).

Table 3.4  
OCCUPATIONAL HAZARDS IN 500 WORKERS

System	Name of Condition	No.	Percentage
Central Nervous System	Giddiness	229	45.8
	Headache	166	33.2
	Neuritis	126	25.2
	Insomnia	110	22.0
	Tremor	109	21.8
Respiratory System	Cough	82	16.4
	Bronchitis	41	8.2
	Emphysema	14	2.8
	Asthma	6	1.2
Digestive System	Nausea	52	10.4
	Dyspepsia	43	8.6
	Peptic ulcer	33	6.6
	Vomiting	10	2.0
Circulatory System	Palpitation	146	29.2
	Hypertension	57	11.4
	Extra Systole	4	0.8
Eye Condition	Lacrimation	89	17.8
	Low vision	29	5.8
	Amblyopia	10	2.0
Allergic Condition	Rhinitis	23	4.6
	Non-specific skin rash	18	3.6
	Sinusitis	06	1.2
	Eczema	05	1.0
Total		1441	288.2

(Tripathi et al, 1985).



In a very recent study of the health of women beedi workers in Indore, it was revealed that 62 per cent of the women examined, worked for between 8 to 12 hours, daily, and 27 per cent, for more than 12 hours. A majority, 58 per cent of the women had worked for more than 10 years, but 77 per cent were paid only Rs.5 to Rs.10 per day. (Chatterjee, 1987).

The health profile of the women beedi-workers as revealed in this study was:

Table 3.5  
OCCUPATIONAL HEALTH PROBLEMS A) AT WORK AND  
B) AFTER WORK

Health Problem	(A)percentage	(B)percentage
Bodyache	23	7
Back pain	56	12
Breathlessness	11	6
Coughing	5	1
Pain in limbs and shoulders	63	9
Listlessness	13	5
Exhaustion	46	63
Headache	37	21
Dizziness	44	47
Stomachaches	5	1
Eye problems (watering, burning)	25	16
Others (fever, insomnia, ulcers, blood pressure)	1	1

Source: Chatterjee, 1987, p.23.

There seem definite occupational health problems associated with beedi rolling. These include pain in limbs and shoulders, back pain, exhaustion, dizziness, headache, eye (watering, burning, and poor vision) and respiratory problems, among others. Most beedi workers experienced two or more occupational health problems at a time, both while working and after. The degree and extent of the health problems appears to be associated positively by length of the work-day and years of work. (Chatterjee, 1987).

The study also looked into the gynecological and other health problems of women beedi-workers. All but one of the women workers in the study, reported gynecological and other problems. Exhaustion and dizziness were the most common, 91 per cent and 90 per cent respectively. Pain in the lower abdomen was reported by 62 per cent and 58 per cent said that their periods were earlier than the due date. White discharge or leucorrhea was mentioned by 54 per cent of the women. Anaemia seemed to be a common condition, though more research in this aspect was felt necessary. (Chatterjee, 1987).

#### Chikan Work

According to the Report on the Status of Women 1974, Towards Equality,

This traditional industry, which had languished in the period before independence, revived as a result of efforts made by the Government of Uttar Pradesh after independence. It is a fine art of embroidery done on a wide variety of products such as kurtas, shirts, table linen, handkerchiefs, saris, etc. The annual



value of output of chikan goods in 1972 was estimated at about 75 lakhs, which was five times that of 1959. According to official sources, the number of craftsmen had also increased five fold, from about 5,000 to about 25,000 in 1972. (Committee on the Status of Women in India, 1974).

According to the Uttar Pradesh Handicrafts Board, the number of workers engaged in this craft in 1973 was about 45,000 and the annual value of their output was around Rs.1 crore. According to a very recent study by The Self-Employed Women's Association, there are 75,000 women engaged in chikan embroidery in Lucknow. "This traditional and highly-skilled activity is almost entirely carried out by Muslim women from their homes. (Chatterjee, 1987).

In the years since independence, the taste for chikan embroidery has revived and goods like saris, kurtas and table linen, are marketed to Delhi, Bombay, Calcutta, as well as exported abroad. Chikan work is now also done on new varieties of materials like silk, voile, nylon, etc. In spite of this expansion, however, the lot of the workers has not improved but has in fact become worse. (Committee on the Status of Women in India, 1974).

Since the workers are pre-dominantly Muslim women, who observe purdah, they have no direct links with the consumers. Only 0.27% of the women covered by the study in 1973, obtained work directly from the consumers. The rest of the women had to obtain it through intermediaries - contractors, wholesale traders and Government agencies. (Committee on the Status of Women in India, 1974). As minimum wages have not been fixed by the State, women

are paid at rates, determined by the merchant or contractor, which are far below subsistence level. At the same time, given the ready market for chikan products, the profit margins of the merchants and contractors are enormous. (Chatterjee, 1987). In 1973, the wholesalers' margin of profit was estimated to range from 60 per cent to 73 per cent. (Committee on the Status of Women in India, 1974). Currently, chikan workers receive wages irrespective of the stitches they use and no matter how intricate and time-consuming these are. If any articles are damaged while sewing, the workers' wages are cut. (Chatterjee, 1987). Deductions were made from wages on various other pretexts as well, e.g. delay in completing work and bad craftsmanship. (Committee on the Status of Women in India, 1974).

According to the Status of Women Committee Report, 1974, a majority of the workers live below the poverty line, - 74 per cent of the contract workers, 62.16 per cent of the self-employed-cum-contract workers, and all the wage employees earn less than Rs.40 per head per month.

The earnings were the lowest for the wage employees and the highest for the self-employed. The average monthly earnings of the contract workers were less than Rs.27/-, that of the wage employees less, than Rs.15/-, and that of the self-employed, less than Rs.200/-. The self-employed-cum-contract workers earned on an average around Rs.60/- per month. All the categories of workers, except the self-employed, reported decline in their incomes. The average contract worker could earn Rs.34/- in 1969 as against Rs.26/- in 1973. Both wage employees and self-employed-cum-contract workers experienced a decline of 30 per cent in their incomes



over the period. While it is generally estimated that these women only supplemented the family income by this work, a large number of them, whom the Committee on the Status of Women, met in Lucknow were widowed or deserted women, who were supporting their families by their own earnings.

In the 1987 study, 39 per cent of the women reported ~~that they~~ earned between Rs.21/- and Rs.30/- per month, and 18 per cent said they earned between Rs.10/- and Rs.20/-. Those who earned between Rs.60/- to Rs.65 per month, were 16 per cent of the total sample. (Chatterjee, 1987).

An earlier study had indicated that, a majority of the workers live below the poverty-line. A large number of women, were widowed or deserted by their husbands and were supporting their families by their own earnings. (Department of Science and Technology, 1983).

A majority of the women fully realise their helplessness at the hands of the middle-men. They would like to become self-employed, but find it difficult because of their lack of capital, education and the inaccessibility of the market. A large majority wanted reopening of the chikan centres by the Government. Seventy-three per cent wanted the government to help in the supply of raw materials, forty-five per cent wanted financial assistance and credit through the banks and seventy-three per cent wanted the government to make marketing arrangements. Nearly sixteen per cent wanted fixation of minimum wages. (Committee on the Status of Women in India, 1974).

In the recent study, almost all women experienced occupational problems (Chatterjee, 1987). One of the most common health problem faced by the chikan workers of Lucknow was failing eye-sight. A very large number of them have to wear glasses by the time they reach the age of 30, because of the strain that this work puts on their eyes. Many of them become incapable to continue with this work by the time they reach the age of 50, because of failing eyesight. (Committee on the Status of Women in India, 1974).

Most women did not have the facility of electricity in their homes and they had to sew at night using candles or spirit lamps. Besides, there were no doctors around the area where the chikan workers live and also work. Hence they often go to quacks. The quacks often give them positive lenses, or whatever they have at that moment. (Mitra, 1985).

Weak eyesight, spondylitis and TB were the major complaints. The first, due to the extreme fine work they have to do, spondylitis, because of their constant posture and TB, because they live and work is extremely closed and congested surroundings and sit very close to each other while working. (Mitra, 1985). The DST study indicates that women chikan workers also suffer from postural defects, allergic effects and lung function disorders. (DST, 1983).

The recent study indicated a host of occupational and gynaecological health problems of women. Watering of the eyes, burning sensation, eye pain and poor vision were among the problems reported by 40 per cent of the women. This was



followed by headaches in 34 per cent and pain in the joints (especially, neck, hands and shoulders), among 20 per cent of the group. Other problems like blood pressure, piles, stomach aches, listlessness and bodyache accounted for another 20 per cent. Finally 17 per cent of the women suffered from back pain, as the following table indicates.

Table 3.6

OCCUPATIONAL HEALTH PROBLEMS IN SAMPLE  
WORKERS

Health Problems	Numbers	Per cent
1. Eye problems	159	40
2. Headache	137	34
3. Back pain	69	17
4. Pain in joints	78	20
5. Others(listlessness, bodyache, stomach problems, blood pressure etc.)	81	20
6. None	10	3

Source: Chatterjee, 1987, p.34.

Discussions with and clinical examinations of chikan workers indicated that they experience several of these problems simultaneously at any given point. These occur both while embroidering and after. (Chatterjee, 1987).

Besides, the chikan workers also reported several gynaecological and other health problems, the most common being white discharge or leucorrhea, mentioned by 83 per cent of the women. Eighty-two per cent said they

experienced pain in the abdomen and 79 per cent reported exhaustion. Dizziness was reported by 57 per cent of the women. As many as 42 per cent of women reported that they menstruated more than once during the month and 37 per cent experienced heavy bleeding. Due to the large number of women reporting exhaustion and dizziness, which may be due to the prevalence of ~~anaemia~~ in the women, it is necessary to take up haemoglobin tests as also nutritional programmes for them. A few women were suffering from goitre. Thirty per cent of the women also suffered from bronchial TB. (Chatterjee, 1987).

Table 3.7

DISTRIBUTION OF GYNECOLOGICAL AND OTHER HEALTH  
PROBLEMS IN THE SAMPLE

Health Problems	Numbers	Percentages
1. Menstruation more than once a month	167	42
2. Heavy bleeding during menstruation	146	37
3. Burning sensation while urinating	140	35
4. White discharge (Leucorrhea)	332	83
5. Itching sensation while urinating	221	5
6. No breast milk	163	41
7. Pain in the lower abdomen	327	82
8. Exhaustion	314	79
9. Dizziness	226	57
10. Other (prolapse of the uterus, miscarriages)	159	40

Source: Chatterjee, 1987, p.34.



Compared to the magnitude and range of problems they faced, relatively few women reported that they seek treatment for these. Only 16 per cent said they took some treatment for exhaustion and 11 per cent for leucorrhea. (Chatterjee, 1987).

### Garments

Apart from garment shops and factories, as well as the Free Trade Zone at Kandla, over the past decade there has been a tremendous growth in home-based garment work. There are about 20,000 home-based readymade garment workers in the city of Ahmedabad alone. They work on a piece-rate basis, sewing several types of garments. The cutting of the garments is done by other workers, and the women receive these cut-pieces, from readymade garment merchants. Other raw materials, like needles and thread have to be bought by the women themselves. In addition, they use sewing machines, either their own or rented, for which they have to bear the cost of oil, maintenance, repairing and electricity. (Chatterjee, 1987).

They are paid, on an average, between Rs.8/- and Rs.10/- per day in Ahmedabad. Even this amount fluctuates, and depends upon the merchant involved. Deductions for work of "unsatisfactory" quality and even complete rejections, eat into their already low wages. The workplaces of the women are usually the small, cramped rooms in crowded streets. Here they work 8-10 hours stitching garments and another 6-8 hours on household chores. (Chatterjee, 1987).

This situation as well as their particular work, gives rise to many health problems of the women workers.

The most common complaints were pain in the arms and legs, back pain, especially low back pain, pain in the neck, fever and insomnia. Most of the complaints relate to the working posture of the women. Ergonomic studies have shown that the inconvenient height of the machines and the resulting continuous moulding of the body movements, especially the leg movements "strain the gastrocnemius muscle in the leg and produces lactic acid. From the viewpoint of physiology and biomechanics, this production of lactic acid and its accumulation was found to be the causative agency for producing pain", in the leg muscles. (Ghosal and Chakraborti, 1987).

Besides, the other health problems reported were, dizziness, exhaustion and eye problems. Injuries to fingers due to needle-pricks were also an important source of ill-health.

The gynaecological problems were pain in the lower abdomen, leucorrhea, and burning and itching sensation while urinating. (Chatterjee, 1987).

### Lace-Making

The industry in Narsapur, Andhra Pradesh, is a classical case of the 'putting out' system. The crocheting is done entirely by girls and women, of all ages. The mothers teach their daughters around the age of 5 or 6 years, and they continue till they are too old to do the work, or till their eyes are ruined, because they make lace even in the evenings by the light of dim oil lamp in their huts. (Mies, 1981).



Though there is no exact data on the number of women engaged in this industry, official sources state that their number ranges between 1,00,000 and 1,50,000. Some even put their number at 2,00,000. It may include women from the adjoining districts of Krishna and East Godavari, where the lace industry has spread in recent years. (Mies, 1981).

Started in 1860, lace-making was mainly a small-scale missionary initiative. However, since the beginning of this century, the situation changed and so did the production process. From the women making the entire product, the process was gradually split up into a number of components. These various components were collected by agents for the exporters. Around 1970, the lace industry, and the export of lace, saw a rapid expansion. (Mies, 1980).

The women get the patterns and the thread from middlemen or agents, who also collect the finished lace goods after a certain time, and pay the women their wages. The women are paid piece work rates. For lace made of 2,000 mtrs. of thread, they get Rs.0.56 on an average. Women work also on Sundays and holidays (Mies, 1980).

The manufacturers and local officials argue that these women are "sitting in the house", and are not used to work in the fields and that, crocheting is just a way for them to pass their leisure time. However, women were engaged in lace-making for 6-8 hours per day. Whenever they found time before or after their housework, they took their needles and began crocheting. Thus they had practically no time for themselves.

Not only the male exporters, also the lace-makers, saw themselves mainly as housewives, and not as workers. Although many of them were the actual breadwinners of their families, because the men had lost their lands, they did not change their self-image. (Mies, 1980).

However one lace-maker of Narsapur says,

Our men feel that we just sit in the house and eat, doing nothing. They think that we are investing their money and then show Rs.10/- as our earnings. As if we had won it by playing cards. We say that we are also working along with them....Even pregnant women and women in their post-natal period and old women do this work. One woman of 100 years, Kappanathi Mangamma, used to make lace.... We get up early in the morning, go to the villages and come back in the afternoon. If I have to go to far-off places, then it takes 2 or 3 days. For 10 gross (of thread) it takes 3 days. (Mies, 1980).

The National Commission met 150 lace-makers in Narsapur, of whom, 35 were sole supporters of their families. One of them had been working for 12 years at making lace. She earns about Re.1/- per day. She gets about Rs.6/- to Rs.8/- for completing one reel, which takes at least 4 days if she works 12 to 15 hours every day. She gets up at 4 a.m. After completing her household work, she starts her lace-work at 6 a.m. She works upto 1 p.m., when she has her lunch. She starts work again at 2 p.m. and continues upto 10 p.m. She has had to wear spectacles for the last three years. She also suffers from frequent back-aches. Most women complained about bad eye-sight, head-aches, backaches, muscle-pain and dizziness. "The lace-worker is required to put in continued concentration resulting in the early loss of eye-sight in most women". (Lalitha, 1984).



## Zardozi Work

Zardozi work includes embroidery in gold, silk and cotton threads, making of borders and sewing on of tinsel decorations, spangles, beads and gold cord. Embroidered veils, saris, shirts, jackets, handbags, and shoes, are thus made.

In Delhi alone, there are more than 50,000 zardozi workers, of whom, about 70 per cent, are women and children. Most of them live in extremely unhygienic conditions in slum areas. A large majority of the workers are Muslim. (Deepti and Mehta, 1984).

Though most women do the actual zardozi work, they do not go to fetch the work. Men act as intermediaries. The middlemen take a big cut. Women are forbidden to even bargain with the middlemen. A particular kind of zardozi work is done with the help of a heavy needle. This work is less tedious and better paid, but women are forbidden to do that kind of work; only men are supposed to do it. The wages have not risen over the last 20 years; on the other hand, the wages for some kind of work have fallen.

Women doing zardozi work, suffer from a number of health problems. Their eyes get badly affected by the work. By the time the women are 35 years old, their eyesight becomes so weak that they need to wear thick spectacles. After some years, they find it impossible to work, even with the spectacles. Despite wearing spectacles, their eyes ache. "Jamila Bi, aged about 40, says that

without her spectacles she cannot recognise someone standing right in front of her. Saira, aged 45 has been wearing spectacles for the last 13 years."(Deepti and Mehta, 1984).

The women sit on the floor and bend over their work. Over a period of time, this results in a chronically hunched back. The hands and fingers ache due to overwork, and legs ache due to lack of exercise since the women sit in the one position for hours together. (Deepti and Mehta, 1984).

Each house has only a couple of rooms so the women work surrounded by all the activities of the household. Continual fine sewing for hours, with a racket all around leads to chronic headaches. Saira, says that when she lies down at night every inch of her body aches.

To add to this, is the reproductive role of the women and the lack of control women have on their own body and lives. Fatima wanted to be sterilized after her fourth child, but her husband refused and Fatima was too scared to take a decision on her own. (Deepti and Mehta, 1984).

Hence, low income production, crowded living conditions, which also constitute the place of work, and high reproductivity and strains of child-rearing, greatly affect the health of the women.

### Paper-bag Making

In the Himmatgarh slum in New Delhi, this is the occupation of almost all the women and girls of the



500 families living there. In the Borivli and Goregaon slums in Bombay, women from a few houses are involved in this occupation. For most of the women, they have been doing this work since childhood, as their mother too had done it.

As soon as the women are through with one round of household chores, they sit down near the heap of paper and set to work, tearing, folding, sticking. There they sit, immersed in their work - on the stairs, round the well, in the lane, on the roof or inside a room. (Mehrotra, 1983).

Most women are illiterate and belong to the scheduled castes. Most women work without a break for about 18 hours a day. The wages are piece-rated and vary widely. On an average, the rate is around Rs.2/- to Rs.3/- per 1,000 paper bags, depending on the size of the bag and the kind of paper used. On an average, women and children, working for almost the whole day, can make about 6,000 bags a day.

According to the Delhi study, one woman is able to make at most 3,000 paper bags in a day. In 1982, the women demanded and got a raise in wages. (Mehrotra, 1983).

The accepted rate for bags made of newspaper is Rs.2.50 per 1,000 and for bags made of brown paper Rs.2.25. The trader weighs out the paper, for example, he may give the woman 12 kilos of newspaper, from which she must make, 2,000 paper bags. The women use their own glue, and the 2,000 paper bags, when completed, must weigh 12.5 kilos, that is, the glue must weight half a kilo. The women have to pay for the ingredients and the fuel used to cook the glue.

A kilo of glue costs about Rs.4 to make, so a woman spends about a rupee on glue for 1,000 paper bags, which means, that her net earnings are Rs.1.25 per 1,000 paper bags. The bags sell for about Rs.40/- per 1,000, of which, the woman labourer gets Rs.1.50, that is, about 3.75 per cent. (Mehrotra, 1983).

In Delhi, the women had to bring the raw material from a long distance.

They needed the money, so they had to go. Even when they were heavily pregnant, they would carry headloads all that way. Now the traders have shifted into this area. So months pass without our setting foot outside these lanes. Ashokidevi says thoughtfully: "We have spent our lives, wearing out our fingers to the bone".

They live with constant stress and exhaustion, thus falling prey to a host of chronic illnesses. Their bodies ache from constantly sitting in one position, their backs grow bent from constantly having to stoop. They suffer particularly from pain in the back, shoulders and waist, and stiffness in the joints. Their eyes ache and water from hours of strain. (Mehrotra, 1983).

The neela thotha has a disastrous effect on their hands. Neela thotha is a necessary ingredient of the glue because its poisonous quality protects the bags from being nibbled by mice. Constant contact with Neela thotha causes the women's skin to harden and crack. Deep cracks develop all along the fingers, become permanently discoloured and cause itching.



The women also talked about related diseases. Kamala has developed a desire to eat mud. This is because she works in a dark room all day and is thus not able to absorb vitamin D from the sunlight. This vitamin D deficiency in turn reduces the body's capacity to absorb calcium. The unhygienic atmosphere causes many health problems. Munnidevi has tuberculosis and spent a month in the hospital. All the women have stomach problems. Ashoki suffers from constant acidity in spite of being on a diet. Kamla is a heart patient and has regularly to take injections. Most of the people go to the nearby Girdhar Lal government hospital. The monotony of the work dulls the mind--- the same mechanical motion repeats itself in the brain.

According to one woman paper bag maker, "We are poor, that is why the teachers don't bother to take pains with our children at school. In the hospital, the doctors don't bother about us. The big babus go in ahead of us, we keep sitting there all day, and that means losing a day's wages. And during the emergency, they threw us around here and there". (Mehrotra, 1983).

Hashmi Begum, a paper bag maker in Bombay has lost 3 children, 2 died at birth and one died of pneumonia when he was a year old. (Mehrotra, 1983).

Another problem that faces these women is the precarious existence and increasing redundancy of their occupation itself, as plastic bags are beginning to replace paper ones. (Personal conversations).

Tagai Work

(The observations are based on the visit of the Task Force members to the homes and workplaces of women workers in Jaipur, Rajasthan).

A blanket is made by the men with colourful cloth and a small quantity of light, spun cotton. The blanket is then "designed upon" by the women. The design consists of stitching up the entire blanket criss-cross, all over, according to the design provided by the owner. The tagai work is done by women alone, by sitting either on their haunches or squatting with the soles touching the ground. Women bend ahead and hold the blanket (rajai) fairly close to their eyes. This is especially true of older women.

A hundred to 150 women do tagai work in an area of Jaipur called the Neel-Gharon Ka Mohalla. In the "centre" we visited, 50 to 60 women came. It is actually the house of the owner of a huge tagai business. His wife supervises the women, gives them the designs, the material and the wages. At sale-time, the Government provides the materials, printed at the Government design centres. The rajais are sold at the Government emporium. Other times, the family has its own shop and they buy their own cloth as well.

There are 6 families traditionally doing this business. The government follows the tender system and gets the rajais from these families. The production capacity of this particular family is about 2,000 to 3,000 rajais. The younger generation is also involved in this work. The price is Rs.150 for a single rajai and 250 for a double one.



The mark-up for profit is 20 per cent; 5-10 per cent in wholesale. The Government deals with only these 6 families in Jaipur. The rest of the women work for these families. The turnover of the rajais is very high, especially at the time of the exhibitions - about Rs.1.75 to 3 crores.

The women belonged to the Mansuri biradari. At first the women workers seemed reluctant to tell us their wages. But it seemed, through detailed talks, that it was confusing for them as well. This was because, since the women workers lived and worked close by, they sometimes took loans from the woman employer. She cut the loan from the wages and the women took loans again. And this went on. Hence, they never knew their exact wage. The women worked 7 to 8 hours a day on an average and made 2-3 rajais per day. They get Rs.10/- per day. But this was not fixed. "When we need, we ask the mistress".

Cotton fibre was flying all over the place. The women complained of weakness, extreme fatigue, hurting of the eyes. "We cannot see the eye of the needle. We have to tell the younger people to thread the needle, but we just cannot afford glasses". "Our men don't do anything. Sometimes they try and get some casual work".

Their other health complaints were due to postural problems, that is, aching of the feet and hips from sitting in one position all the time.

Most women deliver at home, often without the dai. During periods, women do the same work. There have been several instances of women having aborted or having early

labour pains among them. But they could not say whether it related to the fact that they sat bent the entire day.

Girls begin to do this work from the age of 8 or 10. Boys do not learn this work. Men know how to do it, but do not do it. The 2 year old son of a woman and the 1 year old daughter of another, hardly looked their age. They looked much younger and very sick.

The women, especially the older women, felt very strongly that an eye-camp should be organised for them with free spectacles given. We talked to the officials of the Women's Development Project, Government of Rajasthan, later, and they have promised to look into this and organise the eye-camp.

### Tie-and-dye

The members of the Task Force went to a "centre" in Jaipur, where a man had organised a tie-and-dye workshop. There were about 20 to 25 women, the others having left earlier.

The women spoke bitterly about their work and especially their wages. They belonged to a Muslim community, which has been traditionally involved in this work.

They get Rs.2.50 per day and work for 11 to 12 hours every day. They come early in the morning to the 'centre' and take their lot of cloth pieces. Most of them come from very far and spend about Re.1/- per day to come from home and go back. The design is given by the centre. They do the work of tying at home.



The dyeing is done by the men. Some women too do it, but very few.

They showed us cuts and dents in the fingers from the metal piece and the thread that they have to use, for their entire working day, year after year. They complained of their fingers paining and eyes too. Backache was also common due to their posture.

This work is done by 2,000 to 3,000 women in Jaipur. One woman complained of severe pains in the stomach. Another woman, one of the most vocal, had swelling all over her body. Her face and hands looked puffed and 'glistening'. They have no money for medicines or to go to the doctor.

Their main problem, however, was the miserable wage they received. Most of their husbands work as casual labourers. When asked by one of the men on-lookers as to why the women do not take jobs, two women shot back. "We are from respectable homes. We cannot work outside. So what if we are poor, we have honour". They insisted that they would not do even this work, but it was due to "majboori".

### Mojadi (Slippers) - Embroidery

The family visited by the Task Force members in Jaipur lived in a fairly dilapidated old vada sort of house, but it was well-lighted and ventilated. However, even an occasional shower could be quite disastrous for the working space of the mojadi women workers.

The windows of the vada were wide and could not be shut. The roof had fairly large holes . The family lived on the top-floor of the vada. They belong to the Mochi biradari. Thousands of women do this work in and around the city of Jaipur.

The women worked on the uppers of the mojadis with zari(golden thread) and coloured reshim (silk thread). They did not draw any designs, but worked each individual design in their head and wove it on the shoe. In one day, they could barely finish 1 pair. They worked for 8 to 10 hours and could get Rs.2.50 for the day's work. The zari and leather was given by the employer, but the reshim was their own, which cost them 50 paise per pair, so they made a bare Rs.2.00 for 10 hours minute, creative work. Initially they got a mere 0.50 p. to Re.1 per pair. The rates increased gradually. However in the last 3 to 4 years, their rate has not increased from Rs.2.50. When women do this work for their own family business, they do not get any cash to call their own.

The raw materials are very expensive, but the labour and the final product is very cheap. The shoes are sold for Rs.28/- per pair. The middlemen are the only ones who make any profit. The women felt that the rate for the embroidery should be a minimum of Rs.5/-.

Their major health complaints were aches in hips, eyes and back. They felt that after working on the embroidery, they feel tired and even housework seems an impossible task. Women work right up to the end of pregnancy. After delivery, they are back to work in 15 days.



## Spinning on Ambar Charkha

The Task Force members visited Baskhoh village near Jaipur, where about 100 women have been given Ambar Charkhas by the Khadi Gramadyog. Women are given the thick cotton-thread and working on the amber charkha, women turn these bundles into finer threads. The thick cotton-thread is fitted on top and the thread moves through cragged wheels and rubber jackets to be turned into the finer thread. Women have to constantly turn the handle of the amber charkha. They squat on the ground and with their right hand turn the wheel forcefully and keep turning it for 10 to 12 hours a day, with housework and child-care as the almost only "interruptions".

If the thread is very fine, they get higher wages, if less fine, they get less. But if they make very fine thread, the thread keeps snapping and they have to stop and adjust the wheels and start again, and again, so the women prefer to get less paid per reel and do it faster.

In their 10 hours of work, they make about Rs.10/- per day. But the rubber jackets as well as other accessories keep breaking and they have to buy the material for the maintenance of the charkha. The small rubber jacket costs Rs.3/- each.

The women felt that they have paid for the maintenance of almost every part of the charkha, except the main-frame. Yet the charkha does not really belong to them. The women felt bitter that Rs.100/- were taken from them for security and not returned. They felt strongly about

the low wages and the having to pay for the maintenance without the amber charkha being in their name.

Most men of the village were traders in cattle. They bought cattle from the villagers in different villages and sold them at other places where prices were better or to butchers.

The main health problems of the women were aches in shoulders, right upper arm, and back. They felt that the cotton dust also affected them.

There is a Government dispensary in the village. But the women felt that it was not very useful, as most medicines were not available there, they had to spend money and buy the medicines prescribed. Most women deliver at home.

### Beed-Piercing

Off Jaipur city, the entire village is engaged in the work of the beed industry. They have traditionally been involved in this trade. The Task Force members visited them.

The women and girls do the piercing of the beeds. The instruments are a low wooden stool, especially made for this purpose, with hollow and clefts, an elastic string tied to a wooden rod, a jug of water with a tube which opens to allow drops of water to fall on the beed which is kept in the hollow in the stool, a metal instrument with an opening as small as the head of a pin where a small "diamond" is placed. The women arrange the



instruments and the metal instrument is lightly knotted with the elastic string. The string is made to move about the metal instrument which is placed in the middle of the tiny bead. Due to the friction, the bead is pierced. The water drops keep falling on the bead and washing down the glass-dust created due to the piercing. It takes, approximately,  $1\frac{1}{2}$  to 2 minutes to pierce a hole into one bead. The women do this work constantly for 10 to 12 hours a day, in between doing their housework of washing and cleaning and cooking and tending to children. They get a mere Rs.3/- for 100 beads. What is worse, their wages have gone down considerably. Earlier, about 6-7 years ago, the women got about Rs.8/- to Rs.9/- for 100 beads. However, in the last 3 to 4 years, new machines have been introduced. Men have been working these machines and this has lowered the wage-rates of the women. The bead merchant also no longer depends on this community for the supply of his beads. This was the main problem of the women. They see their skills, generated and developed over generations coming to nought.

The other problems of the women were weakening of their eye-sight and back pain due to their constant posture.

### Bangle-Making

To string the pearls together and tie them around the bangle was one job that only women did. If the women were from the family, such as the daughter, daughter-in-law, then they were not paid anything. Also, where women were outside workers, they got only 4 paise for stringing and tying one bangle. Rs.4/- for 100 was the rate paid. It

involved women counting the fixed number of beads, stringing them together, winding them around a metal bangle and tying the knot tightly around. This entire operation took 2 minutes. About 20 to 25 bangles could be tied in an hour. With great strain on the eyes, women could make about Rs.6/- per day. Posture was also a problem.

Another part of the process given to women was heating up small metal designs and sticking them to the lac of the bangles according to some design conceived by them, or, as ordered by the customer.

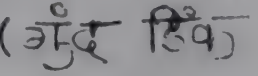
### Block-printing

(Observations here are based on the visit of the Task Force).

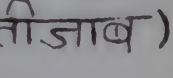
More than a couple of hundred women in Ahmedabad city alone, do this work. They are mainly from one community, originally from Rajasthan, from where their fore-parents have migrated hundreds of years ago. They still speak their own language. Traditionally, women are not allowed to work outside the home. Even today, though most men from the community work on block printing in smaller and medium-scale factories, women are not allowed to do so. So they do the same work at home. However, there are problems in this too, as they live in crowded houses and very narrow streets, so there is neither place to do the block-printing, nor even to dry the cloth. Saira was the first to insist on coming to SEWA and now gradually many more women have come.



The cloth is washed over night in nitric acid. The cloth has to be beaten with one's feet - to remove the 'kanji' (Starch). The process is a labourious one and cannot be done with one's hand, also because of the nitric acid solution.

The colour has to be prepared. It is made with 30 to 40 gms. of caustic soda in hot water, 40 gms. of neptun colour, 20 gms. of urea, 20 gms of turkil oil. These have to be mixed properly and allowed to be cooled. Then 1 litre of edible gum (  ) is added and the colour is ready.

During the process of printing, the cloth is first straightened out. Different colour boxes are kept separately. The blocks are dipped in the semi-liquid colour and placed carefully on the cloth and the women have to strike the top of the block twice or thrice (usually thrice), rapidly and hard - usually with both their hands in turn, sometimes with one.

Near the border, they have to place a paper, so that the design doesn't overlap. The hand movement is as follows: The women move slightly ahead, bend forward, strike, straighten, dip the block in colour, move slightly ahead, bend forward, strike....In one minute, they print almost 12 times. i.e.  $12 \times 3 = 36$  strokes with their hands and shoulders per minute. In between, sometimes, they have to brush the block. After the entire garment is printed, it is dried and the garment is washed in 'tijab' (  ) to fasten the colour on the garment.

If the design is a simple one, each women may complete 6 bedsheets; if the design is fine and requires precision, women may complete only 4 and, sometimes, only 3 bedsheets. The women get Rs.2/- to Rs.5/- per bedsheet. The actual earnings basically depend upon the amount of demand and hence , work available. 50 bedsheets per month is usually the maximum one gets. Hence, earnings remain very low.

During the monsoon, the work is closed as the colour may be spoilt due to water. Hence, for 4 months a year, there is very little work, if at all.

Problems related to health:

- Two women out of the 25 block printers have TB.
- Quite a few women have blood in their sputum.
- Fingers become rough due to the dye.
- The sides of the palm, which they strike on the block, are hard and have toughened. Initially, they used to pain a great deal; both the hands used to be swollen and one was always in pain. But "our body gets used to it....it gets used to any damn thing. Can it help ?" asks Hanifa. Sometimes, even today fingers ache and feel numb, but we massage them with oil sometimes. That feels a little better.
- Their shoulders ache very badly, due to beating the block so often, minute after minute, for years now. "The sides of our hands hurt very badly, due to beating the block so often, as well as due to the dye".



- Their hands are always full of dye. "It just doesn't go off, however hard we try. I'm sure there is lots of dye in our stomachs, as we eat it indirectly when we eat our food".
- "May be because of this, but we feel giddy, especially in summer. On the whole, ours is nothing but जुकासा का काम But what can one do?"
- Some of the women have tried working with gloves, but found it impossible, as gloves interfere with rapid movements. Also they are very slippery and uncomfortable.
- Skin irritation and itching are common. Two women had black, red and blue marks on their chest.
- Chest pain due to the repeated striking of the blocks.
- Women who mainly do the washing of the cloth in Nitric Acid were fairly aged women. They complained of difficulty in breathing and rapid, shallow breathing.

Saira - "I have worked from the age of 13, at my mother's place too. My mother too did block-printing. Our community used to do only this work. But I did not allow my daughters to do this. They studied 5th or 6th standard and then I married them off".

Hanifa - "These days there are many other small and better-paid occupations girls can take up".

Many women said that their daughters prefer to stitch clothes, or do embroidery. Most of the earlier

generation had begun block-printing, as their mothers were doing it. Some of them had started when they were as young as 8 or 9 years.

Two public hospitals are very near the women's house. Yet, most women had had most of their deliveries at home. One woman had 9 deliveries, of which 8 were at home (by a dai) and 1 in the hospital, the last one, because her trusted dai was out of town. Another women had 8 deliveries at home and 2 in the hospital.

The extent of 'foctal wastage' seemed quite high. One woman had 10 pregnancies, 6 children alive, 3 miscarriages, ranging from 3 months to 5 months of pregnancy, and one was still-born. Another women had 10 pregnancies, 1 child had died a few days old, another a few months old. They also talked about 2 other women who had miscarriages. One woman had had no children, because her husband didn't live with her. One woman had had two pregnancies and has 2 children. This aspect requires greater attention.

#### Stitching Gunny Bags (new from old)

About 500-600 people, mostly women and girls, but also a few boys in Shankar Bhuvan hutments in Ahmedabad city do this work. The Task Force members went and met the women workers. This account is based on observations and discussions with the women.

The work consists in getting hold of cement bags, dusting the cement which sticks to the side of the bags and tearing the bags from the two sides. All this is done in a common public place, just outside the residential



area. These torn bags are then brought home and out of the cloth of 2 bags, women stitch and make one big bag. The thread is also supplied by the contractor.

Stitching the big coarse bags, with the coarse thread and a huge needle, takes a very long time and women do this work almost every minute—before and after cooking and in between the housework and child-care. Young girls, if they go to school at all, do the work as soon as they are back from school. Working hard the whole day, women manage to do 25 bags per day and this fetches them Rs.8/- per day. Most women and girls said that they have been doing this work since they were 7 or 9 years old.

Health problems arise because the women breathe in cement almost the whole day. Most of them reported cement in the expectoration. Loss of appetite was a common complaint. Gauri's mother is suffering from TB. She said she spent Rs.100/- for medicines for 4 days. Her father and brother mend torn, worn-out bags. Mangibehn Gandabhai is sleeping on a cot in the courtyard. But she is not at rest. Her breath is short and extremely laboured. "TB" whispers Leela her younger sister. Mangibehn used to make 50 bags a day. Now she cannot, as she has been suffering from TB for almost a year. Her infant, 2 years old, looks half his age and is chronically ill.

Another woman we met said that out of 5 children, one had died. A third woman had lost 1 child out of three, she feels due to T.B.

Women complained of acute low back pain ; head ache; intermittent, shallow cough; weak eye-sight,

especially watering of the eyes. Many talked about pain in hands, shoulders and feet; breathing trouble; extreme tiredness and fever as common problems they had to suffer from.

The public hospital is very close by --- Rs.5-6 by auto rickshaw. Even so, almost all deliveries take place at home. Even young girls like Leela, who had babies 3 or 4 years ago have had them at home. One woman had 4 deliveries at home, one at the hospital; another had one at home, none in the hospital. The third one had two at home, none in the hospital. They had enormous faith in the dai and not much in the doctor. "They don't understand us"

### Chindi Work

This occupation is also a generational one. Children of 7 to 8 years are also seen working. Earlier, children studied till they were 12 years old or so. The following observations are based on the visit of the Task Force members to Ahmedabad.

The work consists of getting the rags (chindi) from the SEWA office or from the trader. These rags come from the textile mills. The bundle of rags is brought home, opened. Together with the rags come out a whole load full of things - dust, small and sharp or blunt pieces of coal. The cloth pieces are then taken out, aired for a while and the women and older children begin to do the sorting. Pieces of different sizes are placed in different corners. While the sorting is going on even very young children sometimes, 3 or 4 year olds, begin straightening out



the pieces. The crumpled up heap begins gradually to take the ~~shape~~ of neatly arranged tiny piles, according to the shapes and sizes of the rags. The tiny piles swell into big ones and it is time that they are stitched and given a useful shape. Women make different things with these rags -- ghaghras, cholis, chania-cloths, dresses and khol (mattress covers). The khols are the easiest to make. Khols are better, because small children and aged can also help. If the entire family works, they can make Rs.4/- to Rs.6/- . Khols are made by stitching different coloured and shaped rag pieces together to form a sort of cover. It requires some skill and some practice, or a great deal of precious time is lost.

Health problems are caused because, when the rags are taken out of the bag, dust, starch and cement fills the air and the entire family breathes this in. Chronic cough due to the sorting of dirty rags is a common problems. Eyes hurt and water. Headaches are common. Malnutrition, due to low wages, is added to the problem.

Malanbi complained of continuous severe pain in the lower abdomen. Periods are scanty and are full of huge clots. She is working in this trade for the last 15 to 16 years, and is about 35 years. The pains started since the last 4 to 5 years. She has two children aged 15 and 7. She wanted to have more children but has not been able to conceive. She suffers from utter exhaustion, giddiness and blanking out after working on the machine. She is advised operation of the uterus (didn't know the details), but is scared. She looks pale and anaemic.

Many women complained of severe menstrual irregularity. Some women had their periods twice a month. They felt this was due to heavy work with the machines.

Banoobibi Ahmedmiya had two miscarriages working on the machines. Once after 4 months and once after two months. She had to be hospitalised for 8 days.

Jarinabano is 17 years old. She is working in the Chindi industry since 5 years. She has studied up to the seventh standard. Her feet, especially her calves ache a great deal. She has severe pains in her lower abdomen. She gets her periods every 20 days. Her mother does not allow her to sit on the machine during her periods, but the rest of the work she has to do.

### Weaving

According to a study of muslim weavers of Barabanki, Uttar Pradesh, ill-health, deprivation and over-work are common problems among most of the families for whom weaving is the only source of income. Local medical services are rarely availed of, mainly due to lack of resources. Women complain of various kinds of ailments but refrain from treatment: "The money is better used to bring food into the house". (Hussein, 1981).

Since women are responsible for 80 per cent of the production, they spend long hours weaving on the loom. Men also engage in weaving but do it for a daily wage on a contract basis outside the home. They are mainly involved in marketing and allied activities. After the men



leave for work, the women complete all the household chores and then settle down to weave, so there are no fixed hours but normally the loom is operated for at least 12 to 15 hours daily. For women, the average working day stretches from 5 in the morning to 11 at night. The time not spent on the loom is often utilised by them to mend and stitch clothes. The work is so distributed among the women in a family that they are able to supplement each other on the loom and not leave it idle even for a few minutes. One tired, overworked woman likened herself to the loom, "what is the difference between me and the loom? I also do not have any rest or respite." (Hussein, 1981).

Purdah is strictly observed and women do not step out of the house except in emergencies or for occasional visits within the neighbourhood. Even where women are members of weavers' cooperatives, the membership only implies a ritual status as they do not participate in any discussions or collective decisions because of the restrictions on their participation and mobility. (Hussein, 1981).

Apart from 'purdah', overwork and lack of time prevents the women from even visiting one another, despite the close proximity in which they live. This has led to a feeling of loneliness and isolation among them. But the feeling that they could call upon one another any time is precious to them. The women are not normally aware of the marketing process, which is considered to be the men's responsibility. One or two women, who had expressed interest in it, were reprimanded by their husbands and "challenged" to take over the responsibility of selling the products. (Hussein, 1981).

The relationship between men and women is marked by restraint and distance and sometimes communication is confined to only indispensable conversation. Women complain that the men hardly ever talk with them and are often only "visitors", to which a man responded by saying, "where is the leisure time for me to be with my wife or children?" Meal time being flexible, it does not bring the family together as whoever gets free, eats first. Women often happen to be the last ones to eat as they keep busy on the loom while the men come home, eat and leave again. Most families are large with as many as 7 children. Whenever hungry, some children, even upto the age of five, suckle their mothers as there is not enough food to feed them. (Hussein, 1981).

The houses have , on an average, two small rooms. Apart from the looms, the rooms are bare except for small necessities. In most houses, there is no separate kitchen due to which the rooms remain full of smoke, at least for part of the day as firewood is used for cooking. (Hussein, 1981).

Since electricity and water connections can only be had on certain cost payment, very few houses have these facilities. There are four wells in the area from where some women fetch water. In the evenings, women work on the loom by the light of small kerosene lamps. (Hussein, 1981). The effects on their eye-sight can well be imagined.

#### Agarbatti(or Incense sticks) making

The agarbatti industry employs thousands of very poor people in the rural areas and in the urban slums.



Most of the workers in this industry are women and children. Employment is not on a regular basis, but depends largely on demand. There are about 10,000 women who make agarbattis in the city of Ahmedabad alone. Although there are some agarbatti factories, most of this work is still carried out by home-based, piece-rate, women workers and their children. (Chatterjee and Macwan, 1988).

In Karnataka, there are more than 20,000 agarbatti workers. The families, which control the industry, have gained the eighth highest place in income tax payment in Karnataka and have received, export awards. (Labour Bureau, 1981). In Ahmedabad city (Gujarat) alone, an annual turnover of 7 to 8 crores is reported. Profits from the export market for the owner are 300 to 500 per cent, and labour costs are a mere 16 per cent. (Patel, 1986).

This may be contrasted with the earnings of the women and children from the industry. In parts of Karnataka, women receive, a mere 60 to 80 paise for rolling 1,000 agarbattis. "Cooped up in dark and dingy places, women and children toil for this income, from day-break till evening." (Labour Bureau, 1981). In Ahmedabad, the wage-rates for 1,000 agarbattis varied from Re. 1 to Rs.1.50. Besides, to be paid for 1,000 agarbattis, the women had to make 1,200 agarbattis, due to the rejections the employers made. (Patel, 1985). Minimum wages are not fixed by the Government. One family can make between 5,000 to 7,000 agarbattis in a day. (Chatterjee and Macwan, 1988).

In a recent study commissioned by the Health Task Force and undertaken by the Self-Employed Women's Association, it was revealed that apart from the daily household chores, 49 per cent of the women worked between 8 and 10 hours a day making agarbattis and 40 per cent worked for 5 to 7 hours a day. Sixty-five per cent of the women earned between Rs.5/- to Rs.10/- per day; nineteen per cent earned between Rs.11/- to Rs.15/- and 12 per cent earned less than Rs.5/- per day. (Chatterjee and Macwan, 1988).

Agarbatti women workers, in Raipur, have to put in 8 to 10 hours of work to make 1,000 agarbattis in order to earn Re.1/- to Rs.1.25 . In a week, they manage to roll out a maximum of 8 to 9 thousand agarbattis with the help of their children. After putting in almost 80 to 90 hours of work a week, they manage to earn Rs.9/- to Rs.12/- only. Most of the women wake up well before dawn to roll out 'agarbattis' for 2 or 3 hours before starting their housework. They put in at least 3 hours of work before going to bed late. Besides, all day, women roll the agarbattis, whenever they can spare a little time in between different household chores. (Sail, 1982).

There are two types of agarbattis - the thinner agarbattis made by using oil and thicker ones, made by using water.

The merchants give the women oil, if needed, charcoal powder, thin sticks, and thread to tie the agarbattis in bundles. Sometimes wood dust is also given to be mixed with



the charcoal powder. This powder also contains crushed tamarind seeds and dry, powdered molasses or jaggery. Most workers do not know about the ingredients of the agarbatti mixture.

..... while older children roll agarbattis, the younger ones play with the agarbatti mixture and sticks. This rolling is done on an inclined wooden board placed on the floor. Their whole back, from the shoulders down, is bent in a crouching position while rolling agarbattis and they sit on a low wooden stool or "patli". A small piece of agarbatti "dough" is taken and rolled with the flat of the right hand. At the same time, a stick is held in the left hand and the mixture is evenly rolled on to it. (Chatterjee and Macwan, 1988, pg. 7).

The main health problems faced by the women workers noted in the Raipur study were (Sail, 1982) :

1. Postural problems
2. Contact dermatitis
3. Skin abrasions

Another health problem, due to the constant, repetitious movements was tenosynovitis. In this ailment the free movement of a tendon is restricted usually by a swelling of the tendon or its sheath. It is caused by very rapid, repetitive finger and hand movements (International Labour Organisation, 1983).

When the women roll out the scented agarbattis, they develop an itch wherever the 'masala' touches their body. According to a study by the Industrial Toxicology Research Centre (ITRC),

Agarbattis are made of sandal wood powder, carbon black, gum and perfumes. Phthalic acid esters are used as the vehicle for perfumes which retain them for a long time in sticks and protect them from evaporation during the storage of agarbattis. Di-methyl phthalate and di-butyl phthalate are very commonly used for this purpose. After analysing twelve different brands of agarbattis, the presence of di-butyl and dimethyl phthalate were detected. It was also detected in the fumes generated from agarbattis. These phthalates are reported to be toxic in experimental animals at high doses. Phthalates are toxic and there is a possibility of exposure to them during the manufacture and use of agarbattis. The workers and users should handle them with care. (ITRC, 1985, pg. 8).

In the recent study by SEWA to specifically identify the occupational health problems of the agarbatti women workers, it was revealed that the most widespread health complaint of the women workers was pain in back and limbs.

Seventeen per cent of the women reported back pain while rolling agarbattis and 73 per cent said they experienced this after the day's work. While only 7 per cent of workers had pain in the limbs (hands, arms and legs) while working, 78 per cent had this pain after they finished rolling. Seventeen per cent of the women suffered from shoulder pain after work. These pains in the back, limbs and shoulder are most likely related to the posture adopted while rolling agarbattis. As mentioned earlier, women sit on the floor with their bodies in a crouching position and lean forward while rolling. Many told us that they find it difficult to get up from this position when they finish working, because of the stiffness and pain they experience. Apart from these posture-related problems, 33 per cent of the women said they had headaches and 13 per cent had blisters on their hands after completing the day's work. (Chatterjee and Macwan, 1988, pg. 11).



Table 3.8  
OCCUPATIONAL HEALTH PROBLEMS IN THE SAMPLE : AT WORK AND  
AFTER WORK

Health Problem	At work		After Work	
	No.	%	No.	%
Back pain	25	17	110	73
Blisters on hands	-	-	19	13
Body-ache	3	2	-	-
Chest pain	8	5	7	5
Dizziness	-	-	16	11
Exhaustion	-	-	3	2
Eye problems	1	-	11	7
Headache	1	-	49	33
Nausea	-	-	4	3
Neck pain	-	-	11	7
Pain in abdomen	4	3	29	19
Pain in limbs(hands, arms, legs)	11	7	117	78
Shoulder pain	2	1	26	17

(Source: Chatterjee and Macwan, 1988, pg. 13).

Severity of health problems is affected by the length of the work-day and years of work. Similarly, the number of health problems, occurring simultaneously, is likely to be affected by these factors. Further longitudinal studies, with a large sample size of workers than this one, could clarify the nature and extent of this association. In

addition, none of the workers in this study used any kind of protective equipment or other preventive measures. They did not cover their mouths with cloth or other kinds of masks, nor did they wear any gloves while rolling agarbattis. When asked the women said they were worried that, wearing gloves, that were available on the market would reduce both their speed and quality of the agarbattis, and hence result in reduced wages. (Chatterjee and Macwan, 1988).

Finally, for all these health problems, only 33 per cent of the women are taking some treatment. Of these, 27 per cent were using home remedies such as hot compress and massage. (Chatterjee and Macwan, 1988, pg. 11 and 12).

Among the other health problems mentioned, exhaustion was most prevalent, with 93 per cent of the workers reporting this. Seventy-seven per cent of the women mentioned dizziness. Both of these could, in part, be due to anaemia, although clinical examination would be needed to confirm this observation. Sixty-three per cent of the women experienced pain in the lower abdomen and 26 per cent reported white discharge. Finally, 24 per cent of the workers said that they experienced itching sensation while urinating. Clinical examination is needed to ascertain the nature of the infection in the workers reporting these difficulties.

With regard to the prevalence of T.B., six women reported symptoms but had not been screened for the disease through sputum tests or X-rays. Four women said that other family members were reporting symptoms but again, no screening had been done. (Chatterjee and Macwan, 1988, pg. 12).



Table 3.9  
OTHER HEALTH PROBLEMS AMONG SAMPLE WORKERS

Health Problems	Yes		No	
	No.	%	No.	%
Exhaustion	140	93	10	7
Dizziness	115	77	35	23
Pain in lower abdomen	95	63	55	37
White discharge	39	26	111	74
Itching sensation while urinating	36	24	114	76
Burning sensation while urinating	24	16	126	84
No breast milk	22	15	128	85
Heavy bleeding during menstruation	14	9	136	91
Early periods	11	7	139	93

(Source: Chatterjee and Macwan, 1988, pg. 15)

Despite the several health problems, the women workers faced, no medical aid is available to the workers. In fact, even the books supplied to the agarbatti rollers to record the amount they make in a day, do not bear the women's name, "so there is no proof of her relationship with a particular agarbatti merchant". (Chatterjee and Macwan, 1988, pg. 8).

Considering the extremely high profit rates, paying for medical costs and other facilities like paid leave, protection against the hazards of the raw materials, are viable and immediately achievable measures within the industry.

### Match Industry

The pattern of organisation in this industry is similar to that of the bidi industry. Whereas men work in the factory, children, as young as 5 years, and women, work at home. No protection is available to these workers. Under the Khadi and Village Industries Commission, a maximum of the cottage match factories are in Andhra Pradesh, Uttar Pradesh and Tamil Nadu, employing 687, 566 and 401 workers respectively, most of them being women. The main hazards are fire and explosion (accidents), chemical toxicity, dermatitis, postural defects and backache. (Department of Science and Technology, 1983).

On a visit of the Commission, it was found that in a mini plant to manufacture matches, the frame for filling the sticks was done by little girls, 7 and 10 years of age in Kerala. The sulphur dipping was done by men. The man who brushed heated sulphur on the match-box, stated that no one could do this job for longer than 3 or 4 years as the lungs were affected, and the person had to be on a certain allopathic drug every day to counteract the poisonous fumes.

### Brass Ware Industry

It is located mainly in Moradabad with a population of 2,50,000. Of 40,000 are engaged in the metal work, including principally brass. It is essentially of the nature of a cottage industry where one family generally confines itself to one process. It is not uncommon to see persons belonging to three generations working in one room, their age ranging from 6 to 60 years. The environmental,



sanitation and working conditions of heat and light, are appalling and there is high morbidity related to respiratory diseases, accidents, foreign bodies in eyes and heat exhaustion. (Department of Science and Technology, 1983).

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## CHAPTER IV

### WOMEN WORKERS IN THE SERVICE SECTOR

Most of the work that women are relegated to, in terms of its content and the skills required, is an extension of the work women are "supposed" to do and have done for generations - cooking, cleaning, sweeping, swabbing, nursing, childcare, teaching, being sexually available.....

Most of this work is termed "unskilled". But, in reality, it is work which requires a great deal of skill, meticulousness, judgement, decision-making, and responsibility. However, the "training" for this work, is not necessarily formal training, but comes with growing up as a girl in this society. It is not by volition or choice, but by virtue of being born as a female-child in this society. This is also precisely the reason why it is not recognised, not seen and not valued.

Outside the home, the same vicious circle continues. Because certain work is women's work, it is "unskilled" and because it is "unskilled", it is women's work. All the rational, objective criteria fail, but yet the end product of this vicious circle is presented as a given, as a rational, objective circumstance, rather than as a bias built into the labour and commodity market, due to assumptions and premises which have nothing to do with rationality.

The "Service Sector" as we have termed workers who work in order to provide services to society generally,

and to their "clients" directly, include precisely those workers who perform this extremely skilled work, which has behind it, years of training and generations of experience, emotional conditioning and hard labour. These may include domestic workers, washerwomen, ragpickers, sweepers and scavengers, prostitute women and many other women doing a wide variety of tasks.

### Domestic Work

Housework has been considered, especially in today's society, as an unskilled and not-so-strenuous job; more so the work of domestic workers. Yet, the personal experiences of domestic workers, which have been documented, indicate a number of fairly serious health hazards.

Though domestic workers exist also in rural areas, working in the homes of rich farmers, the majority of the domestic workers live in hutment colonies which have sprung up all over, in cities and towns. Hence, problems like inadequate water supply, poor sanitary facilities, sub-standard housing and alcoholism, which are the problems of most slums, are also the problems faced by the domestic workers. It is generally difficult to gauge the exact number of women in this occupation, as workers in this category have not been enumerated as such by the census. This itself is a reflection of the valuation of this sector.

According to the Report on Working Conditions of Domestic Servants in Delhi by the Ministry of Labour, Government of India, nearly 90 per cent of domestic



workers are women. According to the national survey conducted by the School of Social Work, Mangalore, women constituted 87.09 per cent of domestic workers in Karnataka, 82.38 per cent in Ranchi, 78 per cent in Kerala and 90.75 per cent in Andhra. (Roshni Nilaya, no date).

Problems faced by the women domestic workers are:

1. deplorable wages
2. high level of insecurity
3. illiteracy and lack of marketable skills
4. lack of confidence in securing other productive jobs
5. long and unregulated working hours
6. no paid holidays
7. no paid sick leave
8. immense work load
9. no maternity benefits
10. health problems

These will be dealt with in detail.

### Wages

Despite, the spiralling price-rise, year after year, wages have not kept pace. In fact, they have miserably lagged behind. In many cases the organised sector has the dearness allowance, which at least to some extent, offsets the increase in price-rise, while for the unorganised sector, which includes the domestic worker, every price-rise cuts into her wage, depressing her real wage even further. In the conditions in which she lives, it means a further nutritional deficiency for her. This is especially so, as many studies in Pune and Bombay indicate that women domestic workers are often the sole supporters of their family. (Bhise and Bhonsale, 1980).

Wages are most often paid in cash, but sometimes in the agrarian economy, work is paid for in kind - food grains, household articles or cash crops. (Roshni Nilaya, no date). Payment is often irregular on the pretext that the domestic worker is "part of the family".

The national survey referred to above, estimated the wage-rates for domestic workers in different areas as follows:-

Place	Percentage of domestic workers	Wage-rate per month (in rupees)
Karnataka	32	31- 50
	27.11	21- 30
Ranchi	52.75	15- 30
	21.86	30- 45
Kerala	37.12	21- 30
	24	20 and above
Maharashtra	58.80	51-100
	19.30	101-150
Delhi	42.50	51-100
	20.50	101-150
Andhra Pradesh	44.50	101-150
	39.25	151-250
Calcutta	39.64	0- 50
	33.39	51-100
Tamil Nadu	50.41	51-100
	23.11	0- 50

Source: (Roshni Nilaya, no date).



According to a study of women domestic workers in Warangal,

A general review of the economic position of servant-maids indicates that they continue to remain where they were over the years. In some cases, their condition has deteriorated and their families continue to struggle, unable to get even minimum necessities of food, clothing, housing. For ten years, there has been no change in wages, and no minimum wages have been guaranteed. This is in contrast to the position of the 'employers' who have had several pay hikes during the last decade. Despite the fast rising prices and the galloping inflation, the servant-maids' incomes were completely stagnant. During the last ten years, about 20 per cent of them lost their jobs and had to search for jobs at other places; their demand for wage increase was not granted, despite the increase in the quantum of work. Only a few (10 per cent) could get an increase in their wages. (Manohar, 1983).

It is reported that in Hyderabad, the wages of the domestic workers vary from Rs.40 to Rs.100.

Another problem is related to the wages of women domestic workers. In many places, especially in the bigger towns and cities, Government and municipal officers and others, such as the railways, are allotted servant quarters. These officers employ women domestic workers and, in return for the quarters, make them work for as low a wage as Rs.20 to Rs.30, or even free for a whole day's work. The logic is that the woman provides the labour free in return for family accommodation, while the husband is supposed to work outside and provide for her. This is sheer exploitation noted in large

Government colonies in which the officials enjoy housing at much less than the market rates.

Women domestic workers belong to the economically most disadvantaged groups and, hence, live in slum colonies, where they face a lack of basic amenities like water, latrines, electricity, street-lighting. Lack of public latrines affects the health of the women. Modesty allows them to attend the call of nature only before sunrise or after sunset. Urine and bowel retention leads to untold ailments, urinary and genital infections, kidney diseases, and digestive disorders. In some places in Pune, they have to squat on Congress grass which causes skin diseases (Pawar, 1982). Having to go after dark, also make rural women more vulnerable to snake, scorpion and other bites. Many grass-roots agencies also report that because of having to obey the call of nature only in darkness, without latrine facilities nearby, the frequency of rapes and molestation is very high at such times.

### Insecurity

According to the national survey conducted by the School of Social Work, Mangalore, in Calcutta only 6 per cent of the workers had made some contract with the employers, while, in other regions, it is a mere 1 to 2 per cent.

The majority of the workers have no contracts made and their jobs are totally insecure.

For those who have contracts, it is made with a third party or agent, or the parent of the workers. Hence, the exploitation runs beyond the employer-employee relationship and children



from villages are sent by their parents to towns and cities to work as domestics, while the wages are paid directly to the parents of the child. They are often kept in bondage till the debt is cleared.(Roshni Nilaya, n.d.)

By and large, the majority of domestic workers have no security of employment and can be terminated at a moment's notice. Such insecurity can have deleterious effects on their mental health.

### Long Working Hours

The working hours of women domestic workers are not fixed and, hence, they rarely get any free time for themselves. This increases the workload, without any prospects for overtime payment.

According to the report of the national survey on domestic workers,

"Rest is considered a necessity in industry and is required after every 4 hours of continuous work. In domestic service, it is usually considered a luxury by the employers. In Maharashtra and Ranchi, 40 per cent are not given any rest period. Part-time workers have no time to relax at all." (Roshni Nilaya, no date).

Even according to the Warangal study, "extra payment is not made for working extra hours." (Manohar, 1983).

The day starts at 4.00 a.m. as she has work to do in her own house before she proceeds for 'work'. Often, her day of paid labour begins at 7.00 a.m. and continues till 11.00 a.m. After this, her day of unpaid labour

commences again. At about 2.00 p.m., she starts her afternoon round till 6.00 p.m., returning home to start cooking, feeding, washing and taking battering and abuses from her husband. She generally goes to bed some time near midnight. The consequences on her health, leave little to be imagined.

### Leave and Holidays

The women domestic workers have neither a regular weekly off, nor paid leave. According to a study of women domestic workers in Bombay, "most of the domestic workers work right through the week and through the year." (Nirmala Niketan, undated).

In the Warangal study,

Only in the case of three respondents, holidays upto 15 days were given with full payment. Generally, employers cut wages whenever the servant-maids do not turn up for work, even when the reasons are genuine, such as sickness, function in the house, etc. There is no pay for maternity absence. In a few cases, the servant-maids send substitutes whenever they fail to turn up. In most cases, children are sent. Conversely, some employers engage their own 'substitutes' and the wages of absentee servant-maids are cut accordingly. (Manohar, 1983).

The national survey comments, "though the hours of work are regularised in Kerala, 76 per cent of its workers do not enjoy any holidays. The part-timers were supposed to arrange for a substitute before going on leave." (Roshni Nilaya, no date).



The domestic workers of Warangal reported that "medical aid from the employer's side was not available except for those who worked in houses in the medical college campus. On the other hand, in some cases, the salary of a few servant-maids was cut when they could not go to work due to illness.(Manohar,1983).

The health problems the domestic workers face, relate directly to the changes in the nature of housework and the tasks defined for domestic workers, as much as to low wages, and lack of benefits, such as paid leave, sickness and maternity benefits.

The new dimensions of housework which in turn, have created the problem of increased workload and affect health are:

1. Queuing up for various essential commodities (at ration shops, etc.)
2. Fetching milk.
3. Taking small children to school and fetching them back home.
4. Looking after infants and young children.
5. Fetching water from public taps.
6. Due to the advent of mass consumption-clothing, many middle class families have stopped or reduced their outside laundry and prefer to give almost all the clothes to the domestic worker.
7. The special washing powders are harmful to the skin; the incidence of skin diseases affecting the hands and feet has gone up following the advent of detergent powders.
8. Dusting furniture, cleaning glass-panes, cleaning television sets, etc.

9. Often, they are asked to wash basins and toilets with acid, causing severe burns on the hands.
10. Storing water, fetching flour from the mill, fetching bread, vegetables, groceries as required, extra washing when guests arrive, looking after child, cleaning the employer's vehicle, drying vessels and crockery. (Pawar, 1982). Cases have been reported of domestic help being made to wash currency notes and coins everyday.
11. Besides, domestic workers have often to do many more tasks than they are hired to do. And the hours of work do not reflect the strenuousness of the work. Most domestic workers do 15 to 20 jobs instead of the 3 to 4 'main' ones they are supposedly hired to do.
12. In many places, washing machines are dreaded because many more clothes are dumped, including bed sheets and curtains, which have to be rinsed and put up for drying.

According to the Pune study, "working in water all the time, the women develop chronic body aches, chills and cold. When they scrub utensils, the salt and spices inflame these bruises. Constant exposure to dust is also a problem faced by the women domestic workers." (Bhise and Bhonsle, 1980).

The other health problems faced by the women domestic workers were: amenorrhea, postural problems and bursitis - "housemaid's knee". (International Labour Organisation, 1983).



According to a study of female Tamil domestic workers, who have migrated to Delhi, the extent of child mortality is very high.

On an average, the women have three children. On an average, they lose one child. When the number of children born is five, the death toll is three....Most children died between six months and two years of birth. A few died of chicken-pox. By and large, parents did not know what had caused the children's deaths. Pattu, says "I gave birth to nine children. All but three died".(Prabha Rani and Kaul, 1986).

A study of women domestics in Delhi indicates that women do not go to the hospital due to fear of the hospital and the long delays once there, which they cannot afford because of their work. Most of the women hold a number of jobs and time is of great value to them. (Dasgupta, 1980).

Mental health is also an important issue. Being stuck in the same place - kitchen or bathroom, or her own one-room juggi, has adverse effects on her feeling of well-being. She feels restricted and tied down. They also have to face problems like battering, and, in some cases repeated rapes, and sexually transmitted diseases. Sexual exploitation is an important hazard. It is reported that women domestic workers have been used as guinea-pigs for Net-En and other hazardous and dangerous drugs.

Many women feel that their work is demeaning - washing someone else's dirt. Many would like to do other work if alternatives are available.

Women domestic workers face the threat of sexual harassment. Various incidents of false theft charges (Pawar, 1982; Gothoskar, 1987) have been reported, which have caused immense tension (Singh, 1983) and feelings of

worthlessness, humiliation and powerlessness. Women domestic workers also experience humiliation in various other ways. They are ordered around and insulted. They are given left-over food, which they often accept due to dire necessity. Very often women domestic workers depend on the left-over foodstuffs to supplement their inadequate diet. This situation itself is one of humiliation.

Towards Equality, the 1974 report on the status of women has noted that,

Domestic service, for cooking, cleaning, sweeping, washing and looking after children is a major avenue for wage employment of women, particularly in the urban areas. Considering the large numbers in this occupation, it is unfortunate that no effort has so far been made to collect data on their numbers, wages and conditions of work. They are not protected by any law or regulations and even the modicum of protection that the Minimum Wages Act provides, is not applicable to this group.

Full-time workers may sometimes be provided with accomodation and food, though the accomodation is generally inadequate. The pattern, however, is not uniform. There are also no limits to their hours of work. Part-time workers generally get no accomodation or food, and their employment is subject to much greater insecurity....Their basic needs are hardly met by their meagre income. In order to bridge their consumption gap, it is common for these women to work for several families. In total, their working hours often exceed 12 hours a day.

We met groups of these women in Calcutta, living in the slums. Most of them were sole-supporting mothers, who could carry on their work in several houses only with the help of young daughters. The latter have to start this work from the time they are 8 to 9 years old. Younger children are left by themselves



near the homes. In one slum we found that the children were left tied to a tree. Babies in arms are often carried to work. Older boys are sent to school, though lack of supervision does not always guarantee their attendance. Malnutrition is high in such families, and both adults and the children are exposed to all the evils of slum-living, lack of proper sanitation, pollution and congestion. One teenager we met was working in several houses to support an unemployed father, a sick mother and three younger children. The normal income from one household ranges from Rs.20/- to Rs.40/- per month, depending on the nature of the work. The fortunate few who can obtain and maintain work in four or five households, may earn an average of Rs.150/- to Rs.200/- by working over 12 hours a day. (Committee on the Status of Women in India, 1974)

In 1987, more than a decade after the Status of Women Committee Report, the situation of this category of women workers in the informal sector, has not changed. The Status of Women Committee Report (1974) suggested, "A comprehensive investigation of this group of workers is an imperative necessity, with provision of at least the basic services for the protection and welfare of their children." There has been no move in this direction for the last decade. Almost three decades ago, in 1959, a bill called "Domestic Workers (conditions of employment) Bill" was introduced in the Indian Parliament. But it was allowed to lapse. (Roshni Nilaya, no date).

Recently, there has been a move to formulate legislation to cover domestic workers. However, this move restricts itself to domestic workers who work full-time in one household. This is unfortunate, as the majority of domestic workers work full-time, not in one household, but in many.

It is now urgent that new thinking goes into framing some comprehensive legislative measures which take into account the conditions of women domestic workers outlined above and take concrete steps to change the situation.

### Washing and Laundering

The dhobans are a familiar figure in many households. There has been very little research on this section of working women, who are mostly involved in the family occupation of laundering clothes.

There has been almost no research in India on this category of women. Research abroad has indicated many health hazards for laundry workers. According to the women's occupational health resource centre, U.S., women laundry and dry cleaning workers have a higher rate of several types of cancer than women in other occupations. These are mainly of the kidneys and genitals, followed by that of the bladder, skin and lymph tissues. (General, Municipal Boiler makers, and Allied Trades Union, 1984).

Tetrachloroethylene, the primary dry cleaning solvent, has been shown to cause kidney and liver abnormalities, irritation of the eyes and upper respiratory tract, fatigue, nausea, drowsiness and memory impairment. (General, Municipal, Boiler makers and Allied Trades Union, 1984).

The acute water shortage facing most cities affects the washer women seriously. The washer women have to begin to wash clothes at midnight or whenever there is water. Giddiness, hunger and sleeplessness were reported as common problems. During times of water scarcity, water



availability is on alternate days. Workloads are, therefore, accumulated and two days of work has to be performed in one day, leading to acute physical distress.

Apart from chest pain which the washer-women experience while carrying a heavy load of clothes, washing and squeezing causes pain in the arms.

### Rag Picking

Rag pickers constitute one of the lowest rung in urban poverty groups. They reside in slums, pavements, on stations, and, hence, face all the problems experienced by these dwellers. These problems are related to either lack of civic amenities, health and education facilities or are related to the most basic question of security of shelter. The majority of rag-pickers are women. The occupation yields little for the women, and this too is drastically reduced, due to their illiteracy and not being able to bargain over proper weighing of the goods etc.

The work consists in scanning the garbage bins, and refuse-heaps and this implies constant contact with dirt and filth and, thus they work in extremely insanitary circumstances. It exposes them to innumerable germs causing severe health problems. Sometimes to overcome this repulsive and monotonous nature of work, both at home and outside, women tend to take to drinking, which further creates health problems (Shah, 1983).

The study of women rag-pickers in Bombay estimated the per capita income to be Rs.80 to Rs.100 per month. The majority of the rag-picker families spent more than 60 per cent of their income on food and clothing. Expenditure

on housing was less than 5 per cent. In 10 per cent of the families surveyed, there was no expenditure on health or education; 44 per cent spent less than 5 per cent; 30 per cent spent between 5 and 10 per cent. The women spent from 4 to 12 hours per day at their work.

Of the women rag-pickers interviewed, 76 per cent felt that their occupation was affecting their health. The problems mentioned were : 66 per cent-dog bites and glass cuts; 14 per cent - skin diseases; 36 per cent - virus infections like flue, cold, cough, headache and fainting (There were multiple responses). The women tried to cure themselves with home remedies and took the help of medical facilities only when serious. (Shah, 1983).

They experienced sexual harassment at the centre when they went to sell their wares. The men at the centre abused the women.

Many women also mentioned that they were being harassed by the police. The police were said to doubt the women for stealing and harassed them. They were allowed to go, only after some bribe was provided to them.

Besides, the rag-pickers are looked down upon by the community they live in. Even within the community, they are a class by themselves. This gives them an extremely negative self-perception.

### Sweeping and Scavenging

Sweepers and scavengers in our society are people who are caste-typed. It is an occupation which is shorn



of every pretense of volition. They are the 'low caste' people and this caste-factor is sought to be socially reinforced by their occupation. The women of this caste work as sweepers, cleaning roads, drains and latrines. In the rural and urban areas alike, they continue to perform the most unpleasant tasks.

In a study of the Ahmedabad Municipal sweepers, the tasks of the women sweepers were outlined as follows:

- Removing trash and litter from sidewalks, gutters, streets, alleys, chawls, and open public spaces. This includes removing nightsoil (in areas without sewage systems), cowdung from roads and pavements.
- Sweeping roads and sidewalks.
- Carrying refuse to the nearest garbage dump.  
(Mehta and Rai, 1979).

The lack of creche facilities for children implies for the sweeper women, the improper care of their children and the compulsion to carry their minor children to the work place. The children have to sleep by the roadside. "Babies are often seen crawling about on the roadside while women do this work!" (Chaudhury, 1986).

Two of the scavengers engaged in the headloading of nightsoil observed that they had to clean private latrines manually with their weeping child on their back. (Chaudhury, 1986).

The women sweepers in Ahmedabad reported that they find the work exhausting as the work requires constant physical labour. They often complain of headaches, body-aches, fever, exhaustion, sickness-nausea, and viral

infections due to their contact with garbage and dust. Since their hands and feet are unprotected, they are liable to cuts due to glass or metal fragments in the refuse; burns, rashes and sores due to the corrosive nature of rotting garbage, specially which is collected over a holiday. Insect bites are also common.

In the rains, the garbage rots faster, and often the gutters are water logged. Women have to work in slush to clear gutters of refuse, as it collects and obstructs the water flow into the sewers, often the water is knee deep, and in the rains they are even more prone to rashes, sores and other infections.

Their nails collect dirt through contact with dust and refuse. Their working hours being long and tiring, the women are often neglectful of personal hygiene, and thus are further vulnerable to disease and ill-health. Because the wheel barrows and dustpans become rusty and corrode, and are crudely made, they are liable to cause cuts which become septic through neglect.

Towards Equality, the 1974 report of the Committee on the Status of Women in India noted:

While Government and municipalities are the most regular employers of sweeper women, many industries employ women under the contract system and they are employed in large numbers in private capacity as domestic workers. The local bodies maintain waiting lists of sweepers who work as substitute workers in temporary capacity as road sweepers, drain and latrine cleaners. The study group of the National Commission on Labour noted that there is a growing trend among municipal bodies to



discourage the recruitment of women in view of the liabilities involved in their employment in the shape of maternity benefits and other conditions of work. They are governed by the Minimum Wages Act. There is no uniformity in wages in different local bodies and complaints about irregular payment of wages, deductions and irregularity in disbursement of salaries, also exist on a large scale. The hours of work also vary from one local body to another.

A study of women sweepers in seven small towns in Punjab indicates that they are severely exploited by most of the local bodies. They are mostly given part-time jobs, without weekly rest, maternity leave or paid holidays, uniforms or house rent allowance. On an average, they get a monthly wage of Rs.80/-. While women sweepers constitute a substantial proportion of Municipal workers, their wages and working conditions vary from one Municipality to another. The study suggests enactments of a suitable legislation to regulate the conditions of work and to bring them on par with men part-time sweepers. They suffer from social disabilities and their problems are further aggravated by poverty and illiteracy.

In a study undertaken by the 1961 census in two towns of Northern India it was found that scavengers and sweepers in private households were mainly women, since men from the families of the traditional sweeper castes have begun to take up jobs as labourers or as employees in the tertiary sector, specially in the urban areas. The study noted that male members of the families, who have taken to other occupations, continue "to allow" their women to work as scavengers. (Committee on the Status of Women in India, 1974).

Thus while men move out of an occupation with health hazards, more women enter it to take their place.

Groups of women sweepers the Committee on the Status of Women had met in Madhya Pradesh and Rajasthan had complained that local bodies discriminated against women by using them mostly as substitute, temporary or contract workers.

The National Commission on Self-Employed Women, 1987, met a group of sweepers in Jammu. They suffered from skin problems due to handling the garbage, besides work problems such as permanency. They were scheduled caste Christian women.

The Status of Women Committee report concludes:

A special problem that affects these women is that with the gradual introduction of modern sanitation in urban areas the demand for their services is on the decline. In our opinion, the plight of these women requires close investigation and alternative avenues of employment. This is particularly important because being scheduled caste and illiterate, their chances of finding such employment on their own are severely limited. (Committee on the Status of Women in India, 1974).

### Prostitution

Thanks to the perversion of sexuality and the commodification of women's sexuality in today's society, prostitution exists in almost every nook and corner of society. Prostitutes in India have to live and work right from the pavements in Bombay, slums in Calcutta to huts in the remote villages. Prostitution in the city has serious implications for the health of women.



Reliable sources maintain that the city of Bombay alone has more than 50,000 brothels with over two lakh prostitutes; 20 per cent of them are minors. Even this is likely to be an underestimation given the secrecy and suppression of evidence relating to prostitution. (De Cunha, 1987). Besides, about 20 per cent of the prostitutes in Kamathipura, Bombay, alone, are children - below the age of 12. (Prerana, 1987).

The most researched area regarding women prostitutes has been their relationship with sexually transmitted diseases (STD). A team of doctors of the KEM Hospital, Bombay, in their study in the year 1978, focused on STD. The study revealed that 67 per cent of women prostitutes and 26 per cent of 'call girls' were VDRL positive - an "extraordinarily high figure". (Bhalerao et al ,1978).

The health camp organised by the Indian Health Organisation in June, 1982, in Kamathipura, Bombay, revealed that 90 per cent of the prostitutes, who attended it, suffered from sexually transmitted diseases. Many of them were suffering from more than one sexually transmitted disease. (Daily, 1987).

However, according to a study of prostitutes in Bombay,

"VD is not so much a problem posed by prostitutes, as a problem faced by them. Many of them also suffer from TB and several other contagious diseases. Doctors treating minor girls in J.J.Hospital, Bombay, found evidence that a few years in the profession takes a heavy toll of their health".(Nori, 1983).

For a long time, sexually transmitted diseases (STD) have been thought of as synonymous with prostitution. Yet, in a recent study among prostitute women in Kamathipura, Bombay, it was found that the women themselves did not know that STD was a malady related to their occupation. (Prerana, 1987). STD is a problem of many women who have husbands, who have many sexual partners, and often these very men infect both the prostitutes as well as their own wives.

What exactly are the health implications for women who suffer from STDs ?

STDs result in devastating sequelae in women. Besides the pain and suffering associated with these infections, a large proportion of women are left with scarred reproductive organs resulting in recurring infection, ectopic pregnancy, impaired fertility and even complete sterility. In societies where a woman's importance is closely associated with her ability to bear children, this loss of fertility results in a drastically reduced status, and often abandonment by her spouse. (Guinan, 1980).

Often, he is the one to have caused it in the first place. "In addition, inadvertent transmission of an unrecognised infection from mother to offspring may result in death or deformity of the infant, thus adding more suffering and guilt to the heavy burden of a woman afflicted with STD". (Guinan, 1980). There are many other effects of particular STDs, immediate and long-term, on the health of women and their infants, including blindness. Syphilis and Gonorrhoea are the most common STDs. In the KEM study, syphilis had the highest incidence. Syphilis can cause destruction of brain tissue and spinal cord. Gonorrhoea affects the urethra and the bladder. (Guinan, 1980)



Most women cannot afford costly treatment, and will not place themselves under medical treatment unless they are compelled to. They ply their trade until their disease assumes a character that prevents the possibility of further concealment. Even then, they take treatment so long as the external signs disappear. These half-treated women are liable to suffer from the after effects of the disease. "They continue to do business with pain in their body and misery in their hearts." (Joshi, 1987).

Abortions : Another health problem is the abortions that prostitutes undergo in conditions that are less than sanitary. Patients are supposed to be treated with antibiotics, following upon the abortion, to prevent infection of the delicate tissues of the womb. They cannot undergo legal formalities and, therefore, often attempt to abort by themselves which, at times, results in complications. For many, abortion is a traumatic experience. They may suffer from guilt pangs which affect them, both, physically and psychologically . (Joshi, 1987).

In a recent study in Bombay, most women had to have repeated abortions, even up to 4 times, and 2 women had had miscarriages in their 4th and 7th month. One of the most important reason for repeated abortions is that the men (customers) do not approve of the use of contraceptives !! (Prerana, 1987).

Women had to continue working during their pregnancy - upto their 9th month. Miscarriages too were universal. Women had to continue to work during menstruation and also immediately after an abortion or

delivery. (Prerana, 1987). Premature deliveries among the women are very frequent. Still-births is almost a norm.

### Other infections

Another very common skin disease which women prostitutes suffer from is scabies, as brought out in the KEM study. A more recent study, in 1986, has pointed out the other health problems women prostitutes face, as seen in the following table: 4.1 (Joshi, 1987)

Table 4.1  
RECENT ILLNESSES SUFFERED BY  
PROSTITUTES

Type of Illness	Percentage
VD	25.00
TB and VD	22.5
Fever, Cold, Cough	17.5
TB	10.0
Jaundice, Typhoid	5.0
None	2.0

Another recent observation was that eighty per cent of the women suffer from TB, and the default rate is very high after the first few weeks. Eighty per cent are anaemic and suffer from ringworm, scabies, acidity and ulcers.

Long hours of work, poor food, insanitary conditions and indiscriminate entertainment of clients, leads to anaemia, V.D. and uterine infections. The widespread prevalence of asthma is also recorded. (Patil, 1987).



Our personal conversations with doctors working in the area, as well as the KEM doctors, indicated that extremely painful uterine and vaginal infections were common. These types do not infect the customers, but are extremely painful for the women. White discharge was also a common complaint.

According to the study by the Indian Health Organisation,

On an average, 10 to 12 girls stay in one room and most of them eat from filthy cafeterias. Clinically, we found that 80 per cent of the women who attended our camps, suffered from STD and after laboratory investigations 90 per cent had demonstrable STD. The prevalence of TB, chronic pelvic infections, anaemia, scabies, parasitic infection, like tick-louse was very high." (Daily, 1987).

Women also suffered from constant pain in their abdomen and from ulcers. "Most women suffer from emotional deprivation and there is a total lack of basic immunisation, chronic undernourishment and an alarming prevalence of infectious diseases." (Daily, 1987).

Most women prostitutes continue to work even if they are seriously ill. Seventy per cent of the women in a recent survey said they had to work either because they could not afford not to, as they were in debt, or because "madam forced" them to, or both. Despite their severe health problems, the responsibility of contraception, by definition, is theirs alone. Forty-three per cent of the women used birth control pills. A majority of them complained of back-aches and morning sickness especially in

the initial period of consuming the pills. Some complained of excessive bleeding during menstruation, which resulted in dizziness and weakness. (Joshi, 1987).

Their addiction to betel leaf, tobacco and alcohol was a result of certain stressful situations. Depression and anger were the two major emotions experienced due to abuse or financial problems. Added to it was hatred and self-contempt. They felt they needed something strong which would keep them going on their feet without breaking them emotionally (Joshi, 1987).

### Mental Health

A study of the women prostitutes in Bombay reveals that extremely cruel methods of torture are used in order to break the initial resistance of the girls and women. "They were beaten up and had to go without food for days, but during that time, were forced to accept clients". (Joshi, 1987).

According to a case-study of a prostitute woman, "in order to prepare them to accept clients, they were kept hungry, locked in a room or even gang-raped....They were brain-washed and told that society would no longer accept them." (Joshi, 1987).

Of the women prostitutes interviewed in the above mentioned Bombay study, more than 52 per cent had absolutely no contacts with their family, and another 12.5 per cent communicated through letters only. The majority had no interest in keeping contact as they had left their homes at a young age and under various stressful conditions.



They were uncertain about their families' reactions. They were in a sort of despair state. They, however, felt extremely lonely and insecure. (Joshi, 1987).

The harassment of the prostitutes by brothel-keepers, clients, financiers, pimps and police has been documented by various studies.

Police harassment in one form or another is also a constant source of tension for the women. According to one report, each Kotha in G.B.Road, Delhi, pays the Kamla Market police station Rs.5,000 a month. This includes payments to many policemen, from the lowest to the highest rungs. In addition, every Kotha pays the crime branch Rs.3,000 a month. And obviously, this is the picture all over the country. (Singh, 1985).

The fact of being trapped in this profession, especially due to the links with the underworld, causes a continuous mental strain on the women, especially in the initial years.

Even later, they were regularly beaten up if they refused to accept clients, or if they said they needed rest or were unwell. On the other hand, often, women were forced to have fights over customers and physical fights with bamboos etc. took place. The women are beaten up by the local goondas who, also demand sex free.

Besides the harassment from the brothel keepers, the pimps, the local goondas, the police and the law, another agency of harassment was revealed in a recent

study.(Prerana, 1987). Though no case of AIDS among the women had been detected, some doctors from a local Municipal Hospital had lured the women prostitutes to the hospital by false promises, locked them up and forcibly tested them for AIDS.

And as age advances and their health and body begins to break down, the future glares at them. "Our life is like a flower; as long as the fragrance is there, we are wanted, the minute the fragrance is lost, we are thrown away."(Joshi,1987).

All these pressures give rise to hypertension, which is very common among many women. A feeling of depression and anger is constantly experienced due to both helplessness and resentment towards a situation which they have not caused, but have been trapped in.

### Income

The income of the women fluctuates widely from month to month. Some have to take as many as 8 clients a night and they make barely Rs.10/- after all the deductions that the gharwali makes. Seventy-eight per cent of the women entertained more than 4 clients per day. The average income from each client was revealed as between Rs.15 to Rs.20. The women belonging to an older age-group earned only Rs.3 to Rs.5 per client. (Shrivastava,1987).

Another study of the Kamathipura women prostitutes indicates that,60 per cent spend Rs.1,000/- per month. But over 50 per cent of it goes to the madam and some for cosmetics, bedsheets etc. (Shrivastava, 1987). Though



a large part of the expenditure is on food, the quality of food is very poor.

### Working Hours

About 70 per cent started their business in the evenings and continued till as late as 2 or 3 a.m. Some had to work from 5 p.m. to 4 a.m. Women were forced by the brothel-keepers to 'entertain' upto 6-7 clients per day.

### Medical Services

Despite the high rate of illness of women prostitutes, including V.D. and skin diseases, it was found that very few of them went to the public hospitals for treatment.

Most of the patients who go for treatment to the public hospitals are men. The ratio of men to women patients for the treatment and cure of VD in a public hospital in Bombay was about 300 : 1 or 2 . The hospital was near the biggest red-light area of Bombay-Kamathipura. So neither distance nor expenses was the problem. Time was some problem as most prostitutes slept during the day. (Chatterji, 1987).

The women there said that they did not want to go the hospitals because they had no time to stand in long queues in the Out Patients' Department; they felt socially humiliated and so remained confined within their rooms during the day; they were afraid of the police and to them, medical procedures seemed far too inhibiting (Chatterji, 1987).

Besides, the brothel-owners wanted the prostitutes to go for cures to only those doctors who enjoyed the confidence of the pimps and the brothel-owners. These

doctors do not cure the girls completely because a complete cure might make them want to come out of the clutches of the profession and the brothel-owners and that the owners cannot afford. (Chatterji, 1987).

Another report has brought out another facet of the exploitation of these women.

In Kamathipura, there is no dearth of dispensaries. Most are occupied and run by "doctors" who have the most dubious medical qualifications. Dr.A.K. has the degree AVV or Ayurved Vidya Visharad. Dr.P.H. calls himself a hakim from Aligarh and yet another "doctor" writes a long list of unknown letters after his name and adds London or Paris for good measure. Almost all these "dispensaries" are located in gutter-surrounded, dilapidated buildings where rickety old staircases lead to filthy, unhygienic consulting rooms.

Even cursory conversations with the young girls and other patients reveal that in the red-light area the remedy for every disease is an injection or 'sui'. Each injection, whether of distilled water or plain vitamins, costs an illiterate, ignorant resident of the area Rs.15/- or more. Medicines and injections are given purely on the basis of superstition and ignorance.

There are dozens of "doctors" in the red light area who treat garmi or VD by an injection of Calcium Gluconate. When a girl comes to them in pain because of a bruised or inverted uterus, they pack her cervix with bandages and call this the phool bithana treatment. The girl squirms in pain. On an average, these "doctors" earn as much as 5,000 to 10,000 rupees a month. Because their patients are the discarded, used, rejected dregs of society, no police force or no governmental drug control helps them. No association of medical practitioners, not many social workers protect them. Even death of patients in such "dispensaries" are hardly ever reported. (Patil, 1987).



In Calcutta, the women have to pay high fees to the surgeons. "The women are often exploited by the local doctors or those from outside the neighbourhood if there is no local doctor. Even if a woman is seriously ill, the doctor will administer a white medicine which is much cheaper than penicillin."

"Around the age of 40, health usually breaks down and they are attacked by serious illness". The alternatives open for them in their old age are to work as domestic servants, become beggars or commit suicide. (Bandopadhyaya, 1984).

The greater attendance of the prostitutes in private clinics and dispensaries is further confirmed by another study in Bombay

<u>Medical facilities</u>	<u>Percentage of women using</u>
Private dispensary	52.5
Public Hospital	22.5
Dispensary + hospital	20.0
Do not take	2.5
No response	2.5

This study revealed that dispensaries were preferred because:

1. they were in their own localities
2. the timings suited their own schedules
3. the need to conceal their identity

The general hospitals and clinics are open in the mornings only upto 11.30 a.m. which is the time the women

begin their day. They have also to follow formalities, which required a lot of time and meeting many hospital people. Many also felt that the hospital staff had a prejudiced attitude towards them. (Joshi, 1987)

The same report comments:

It has been found that for every one case of STD detected, there are 20 more which remain undetected, and in addition a large number of cases are treated either by private practitioners or quacks. The demanding nature of VD examinations, the contempt of medical personnel and the stigma attached to a prostitute inhibit many women from registering for health facilities. Health measures introduced are not in her interest, but in the interest of 'public' health, which inevitably means the male, as the healthy male is seen to keep the production of society (Joshi, 1987).

### Vending and Selling

The different health problems of women vending different wares has received very little attention; though women vendors constitute a large proportion of the workforce through the length and breadth of the country. The little research that exists, is largely confined to women vendors in the cities.

The life of women vendors is a tough one. Their day often begins as early as 3 a.m. and their working day is about 13 to 14 hours long. (Azad, 1986). The fisherwomen in Bombay have an almost 19 to 20 hour working day which consists of everything from buying the fish at dawn to transporting it to their sales outlet, a platform in the market, storing the excess fish, paying the



rent of the storage, buying ice, shouting out their wares.. an endless list of tasks. (Aggarwal, 1987).

Women vendors have to work in the open, in rain, scorching sun or freezing cold, "house to house, sweating in summer and drenched during the monsoon". (Azad, 1986) Most of the women vendors have to do this, day after day in all seasons for many years. What the effects of this constant exposure to the elements on the human body are, is a matter of urgent research. Besides, they have to walk long distances carrying heavy loads. Fish vendors are not tolerated on public transport. They particularly need special attention as observed when the National Commission visited Kerala, and in one of the meetings, vendors demanded cheap transport facilities specially for transporting fish. There are no toilet facilities either, and women vendors cannot relieve themselves for the entire day. This would have severe effects on their health.

The flower vendors often complain of constant headaches due to contact with strong scents. Stiffness in hands and hips is another recurring complaint. "We put our hands and feet in hot water for a few minutes and go back to work". Eye trouble due to continuous concentration is a recurring grouse of flower sellers. (Gothoskar, 1987).

The income of women vendors is erratic, irregular, and insecure. In the remote rural areas, there is no daily vending. Most villages have a weekly market and women vendors have to sustain themselves and their families on the earnings of these. Many women vendors in

the rural and urban areas are the sole-supporters of their families. Thirty per cent of the women vendors in Madras were the sole income earners in their family. (Azad, 1986)

The erratic nature of earnings of the women vendors is aggravated by a number of factors and has grave implications on the health of the women and their children. One of these factors relates to fish vendors. Large-scale trawling and mechanised fishing have affected the earnings of the fish vendors adversely. Families have to often sustain themselves only on the thin rice gruel. Children suffer from tuberculosis, heart and kidney diseases, besides chronic dysentery and diarrhoea. Families spend as much as Rs.400/- a month on medicines, digging into the small capital, that fish vendors keep for buying fish. (Menon, 1986).

Secondly, men are almost the exclusive participants in wholesale trade. Even within small-scale and petty trade, women tend to sell items like fresh greens, limes, betel, flowers or damaged vegetables -- items which are cheap, highly perishable and yield a somewhat lower profit rate. (Lessinger, 1985).

Out of the 111 shops in Sukhtawa village in Madhya Pradesh, 88 were owned by men and 23 by women. Most of those wares like grain, jewellery, vessels, which brought in a substantial income, were rarely owned or run by women. Also, 17 of the 23 i.e. 74 per cent of the shops run by women had no shade, while only 9 per cent of the men faced the sun while selling their products. Again,



while women worked in their shops from 10 a.m. to 2 p.m., the men sat in their shops till sunset as they did not have many household responsibilities and work ! (Saxena, 1987). The women fish vendors in a meeting in Kerala informed the Commission that the men muscled their way to the front side leaving only the back rows for the woman to sit in the market.

Thirdly, the women vendors have to sell their wares at places and markets which are accessible on foot and such places are not necessarily the most profitable areas for the sale of their wares. The only vehicle women have in order to carry their wares is their own two feet, while men can be seen riding bicycles to the next village or to the bigger market. Often women are directly or indirectly forced to sell their products to middlemen, who buy at a very low rate and sell in the market for thrice the price, as in the case of the mahua flowers in Sukhtawa village in Madhya Pradesh. (Saxena, 1987).

The increasing distance of the markets from the place of production, and the need for big investment in acquiring and transporting large quantities of products, inevitably leads to the exclusion of the women from their original role in the retail trade. In the coastal areas of Orissa, Goa and Tamil Nadu, the fish brought in by the men used to be sold by women. Now only a handful of them are seen actually retailing the family's catch. The main catch is captured by contractors, or Government fisheries' agents, and transported to the bigger markets. In big cities, it is a common practice for women to hawk vegetables and fruit in residential areas. Many of them

started with their own market gardens, but have now become dependent on buying the products from the wholesale market with a narrow margin of profits for themselves. (Committee on the Status of Women in India, 1974).

The life of sales girls, seemingly less dreary, is by no means an easy one. The report on the living and working conditions of salesgirls in Madras indicates that most of them are in the age-group 18 to 25 . They are often the only bread-winners. They have to work 10 to 12 hours a day outside the home and receive paltry salaries of Rs.100 to Rs.250, though the minimum wage is Rs.210/-. Their increments are arbitrary, and promotion channels non-existent. The outdoor salesgirls have a more difficult time, with having to walk and climb endless staircases in all odd weathers and being completely unorganised. (Sadasivam and Singh, 1982).

The case-studies of the vendors indicate that child mortality is very high. One vegetable vendor in Madras had lost 2 out of 4 children in infancy. She had to take her 1 year old child with her to the pavements every day in every weather. They have to do the entire housework too. Continuous reproductive roles, or suckling the child while trading on the pavements, cause immense problems to the women. (Azad, 1986).

Among the fish-vending community in Kerala, the infant mortality rate in 1986 was around 180 per 1000, while Kerala boasts of having a comparatively low rate of 40 per 1000. Thirty per cent of the women fish vendors surveyed, had more than seven children. Thus, fisherwomen



lose more children and may therefore, bear more children, thus further taxing their already over-burdened bodies. (Aravamudan, 1987).

Besides, there are other open types of harassment that the vendors have to face. Vegetable vendors in Madras have to rise at 3.00 a.m. and go to the market to buy vegetables. It is extremely unsafe at that hour. Sexual and physical harassment by male buyers and sellers is rampant. (Azad, 1986). Male sellers, especially in remote rural areas, snatch away the forest produce or other products the women intend to sell, or force the women to sell to them at a far cheaper rate. (Saxena, 1987).

Women have to live constantly in a situation of violating traffic laws, for which they are fined very often. (Jhabvala, 1986). Harassment by the police and the municipal authorities is a common hazard faced by most vendors, as the struggle of women vendors in Manek Chowk, Ahmedabad, and of the old clothes sellers reveals. (Jhabvala, 1986). This fear of harassment comes through also in the profiles of the women vendors in Bombay. These profiles also bring out the strength of the women vendors in dealing with this harassment. (Flavia and Vandana, unpublished). Women vendors are arrested sometimes for encroachment, sometimes for refusing to pay bribes to the police. Licenses and sheltered, stable, selling places, closer to the consumers are important demands of the women vendors all over the country. These would lower their tensions.

Apart from sexual discrimination, another factor which is at work is class and caste prejudices, as most vendors belong to the depressed castes. The 'lower caste'

women form the bulk of women vendors. In the broad occupation of vending too, there is an explicit hierarchy. Among the vendors, dry fish selling is estimated 'lowest' even among market occupations. Scheduled caste women make up over 60 per cent of dry fish sellers. A majority among these were widows and, thereby, heads of households, while their monthly income on an average was only Rs.200 to Rs.300/- (Azad, 1986). Effects on nutrition and health of themselves and their children can will be imagined.

There are certain communities which have to bear the burden of the prejudices of society. Pardhis and Boharis are some of them. In these communities, "the history of every child..... begins at the police station. As soon as a child is born, it must be registered at the police station. This is because the British rulers had declared the whole tribe a criminal tribe. The British rulers have gone, but the tribe remains so registered in police records". (Alaka and Chetna, 1984). The constant harassment and humiliation, tension and agony of these women is a source of untold misery and self-perpetuating degradation. This may have consequences on their mental health. Driven away from the villages by the destruction of the self-sufficient village economy, the women make a living in big cities by selling spices and medicines.... Some of them exchange utensils for old clothes.

Bribes to watchmen, and sexual harassment and molestation, are common occurrences. So are rapes of the children of the women hawkers, as the children have to be left on their own the whole day.



Another aspect of harassment that almost all vendors, as well as women from other occupations talk about, is the harassment at home due to drunkard husbands. As a pheriwali in Bombay said, "when my husband died, I felt I was better off. Even if I eat dry bread, at least I eat it in peace. What did I get from marriage, but scolding and beatings ?" (Alaka & Chetna, 1984). Women vendors in Madras had similar experiences. A fruit vendor in Madras says: "At night, I bear the brunt of a different harassment". (Azad, 1986). The members of the National Commission were "gheraoed" by fish vendors who demanded that sale of liquor be stopped.

In personal interviews and conversations, women vendors, as well as women from other occupations, talked about how they have absolutely no control over what they earn. "After slogging for the whole month, my husband just snatches away forcibly whatever I earn". (Azad, 1986). Under such conditions as low income, harassment at work and at home, one can expect that both physical and mental health will be affected.

### Masala-crushing

Masala-crushing is a seasonal activity, restricted to only 3 to 4 months a year. In the city of Ahmedabad alone, there are about 2,000 masala workers. Most masala workers get work by moving from house-to-house in middle class neighbourhoods. The workers take the masalas and sit outside the house, on some level ground, and begin their work. A small quantity of the masala is placed in the vessel. This is crushed into powder, by repeated strokes of the metal pounder. Periodically, the workers sift the crushed masala through a fine-meshed sieve, and put the

larger bits back into the vessel for further crushing.

It takes roughly an hour and a half to crush a kilogramme of chillies and forty-five minutes to an hour for other masalas. However, the rate is fixed by weight and not, by the time taken for crushing. Thus masala workers earn Rs.4/- per kilogramme for any masala crushed. They may crush five to seven kilogrammes a day, thus earning Rs.20/- to Rs.28/- per day. (Chatterjee and Macwan, 1988).

An important problem faced by the masala workers is the increasing redundancy of their age-old skills. Mechanisation in masala crushing has begun to displace the women.

The crushing machines are not only more efficient, but also cheaper. The merchants can have a kilogramme of masala ground at about Rs.1.50, as opposed to Rs.4/-, which is the rate for manual crushing. (Chatterjee and Macwan, 1988, pg. 20).

New machines and gadgets are replacing the women who are "finding it increasingly difficult to find work and may be further pauperised in the future." (Chatterjee and Macwan, 1988, pg. 20).

In a study commissioned by the Health Task Force, and undertaken by the Self Employed Women's Association (SEWA), it was revealed that 53 per cent of the women workers worked between 9 to 12 hours, and 25 per cent worked between 5 to 7 hours daily. For their labour, 42 per cent of the masala workers earned over Rs.15/- per day, and a further 41 per cent, earned between Rs.11/- and Rs. 15/-. Out of the 150 women workers



interviewed, 36 per cent were sole-supporters of their families and depended significantly on masala crushing for a living. (Chatterjee and Macwan, 1988, pg. 22 and 23).

All the masala workers in the above study reported that they experienced several health problems, some while doing the work, and others immediately after, or both. Thirty-eight per cent of the women said that they experienced

pain in the limbs, especially arms and hands, while actually crushing the masalas. The repeated lifting of both arms, inter-changeably, while pounding the masalas, is most likely the cause of this pain. Fifteen per cent of the women also said that they experience a burning sensation in the body, especially hands, while at work. This is probably due to certain masalas like chillies, which irritate the skin and mucous membranes. Another 15 per cent said that they sneeze a lot and their noses stream while pounding. Again, this is due to the masala dust entering the nasal passage and irritating the mucous membranes.

After completion of the day's work, women experienced a wider range of health problems than while actually working. These also seem to be more severe and widespread. Fifty-one per cent of all the women in the sample said that they developed blisters and later callouses on their hands. Considering that a kilogramme of chillies takes over an hour of continuous pounding to be powdered, this result is hardly surprising. The friction caused by the pounder, continuously rubbing against the palm, adds both to the burning sensation in the hands and to the development of blisters.

Forty-Five per cent of the masala workers said that, their whole body, and especially hands, burned at the end of the day's work. If the women sat down to cook immediately, this burning sensation became worse, because of the heat of the stove. Back pain was reported by thirty-nine per cent and an almost equal number, thirty-seven per cent said that their whole bodies ached at the end of the day. Twenty-three per cent felt dizzy and sixteen per cent experienced pain in the limbs after work. (Chatterjee and Macwan, 1988, pg. 24).

Table 4.2  
OCCUPATIONAL HEALTH PROBLEMS IN THE SAMPLE AT WORK AND  
AFTER WORK

Health Problems	At work		After work	
	No.	%	No.	%
Back pain	14	9	58	39
Blisters & Calluses	2	1	76	51
Body ache	-	-	56	37
Burning Sensation (esp. in hands)	23	15	67	45
Chest pain	10	7	22	15
Coughing	12	8	-	-
Exhaustion	1	1	9	6
Eye Problems	3	2	17	11
Dizziness	1	1	35	23
Headache	2	1	17	11
Pain in arms & legs	57	38	24	16
Pain in shoulder joints	7	5	1	1
Sneezing	22	15	-	-
Stomache ache	2	1	9	6

(Source: Chatterjee and Macwan, 1988, pg. 27).



A majority of the masala workers experience several of the health problems simultaneously, an additional burden on their already very poor health. The longer they worked, the more severe were their health problems.

A vast majority, 79 per cent, seek relief for their problems by resorting to simple home remedies. "These include, bathing in cold water to get rid of the burning sensation, applying mud packs to the body and then bathing, rubbing oil on the body and massage." Besides, 89 per cent of them felt "exhausted all the time and 77 per cent experienced dizziness. One possible reason for this could be the prevalence of anaemia in this group". (Chatterjee and Macwan, 1988, pg. 25).

Fifty-six per cent of the workers in the sample reported itching and 54 per cent, burning sensation while urinating. This is, perhaps, in part due to the overall burning sensation in the body experienced by women and discussed earlier. However, these could also be an indication of urinary tract and vaginal infections. Similarly, pain in the lower abdomen reported by 59 per cent, and white discharge by 28 per cent of the workers, could be symptomatic of vaginal infections, cervical erosion and even pelvic inflammatory disease. Here too, clinical examinations are needed to diagnose the causes of these widespread problems. (Chatterjee and Macwan, 1988, pg. 26).

Table 4.3

## OTHER HEALTH PROBLEMS IN THE SAMPLE

Health Problems	Yes		No	
	No. of workers	%	No. of workers	%
Exhaustion	134	89	16	11
Dizziness	115	77	35	23
Itching sensation while urinating	84	56	66	44
Burning sensation while urinating	81	54	69	46
Pain in lower abdomen	79	53	71	47
White discharge	42	28	108	72
No breast milk	22	15	128	85
Early periods	9	6	141	94
Heavy bleeding during menstruation	5	3	145	97

(Source: Chatterjee and Macwan, 1988, pg. 29).

None of the masala workers, who reported these health conditions, sought any allopathic or traditional treatment for those. (Chatterjee and Macwan, 1988, pg. 26).

According to the International Labour Organisation (ILO), grinding and packing of masalas (spices) exposes the workers throughout their working hours to the irritating effect of the spices, which are in contact with the skin and with the mucous membranes of the eyes, the respiratory and the digestive organs.



The irritating effect of the different spices varies and is particularly high in some eg. pepper and chilli-pepper. Many people working with these spices suffer from chronic conjunctivitis and chronic rhinitis. Allergic skin diseases are also prevalent after prolonged exposure, respiratory infections, particularly chronic bronchitis, and sometimes even bronchial asthma, may develop.

In certain workers, mycosis may appear on the mucous membrane in the mouth. Most spices are attacked by fungi and, in pulverisation of the spices, spores of the fungi get into the atmosphere and from there into the mouth of the workers, where they are retained by the inflamed mucous membrane.

Workers, engaged in the processing of spices, often complain of digestive disorders. This may be due to the inflammation of the gastric mucosa or at least the superficial irritation of the gastric mucosa. (International Labour Organisation, 1983, pg. 2091).

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## CHAPTER V

### PROCESSING INDUSTRY AND OTHER INDUSTRIES

This comprises a very wide range of industries, occupations and work processes - fish, cashew, coir, food etc. The pattern of employment and employer-wage labour relationships are diverse- permanent, temporary, contract, casual, and factory-based, non-unionised workers. However, by and large, it presupposes some type of processing of raw materials into final products, usually under one roof.

The processing industries are developing into export industries or at least large-scale production industries, with a major chunk of their products being exported and bringing in enormous amounts of money e.g. the fish, cashew and coir industries. Though the industry can very well afford the basic facilities including a living wage, welfare measures and a healthy work environment, these have been systematically denied to the workforce and the industries have thrived on super-exploitative labour practices. One of the ways of doing this has been through employing female labour, which is supposedly docile, and less likely to organise, as they only "supplement" the bread-winner in meeting the household expenses. This myth has been used to make the work itself, invisible and guard it from labour laws. It is high time now that these industries and the workers are recognised for what they are-- producers of immense wealth for the industry and the national exchequer. This has been hitherto at the expense of their well-being, their health, and their lives.



## Fish Processing

Fish-processing is an important occupation employing women. This occupation has gained in importance in terms of exports, from the 1950's. During the period, 1950 to 1970, mechanised vessels for fishing increased from fifty, to fifteen thousand. In this period, marine fish production doubled from 634 thousand tonnes to 1250 thousand tonnes. Marine food exports have more than doubled in the last decade, from 30,000 tonnes to 75,000 tonnes, while net exports of frozen sea food products are annually about Rs.262 crores. Shrimp/prawn accounts for 65 per cent of the total quantity of exports while 90 per cent of the total value of exports is due to shrimp exports. These developments have led to the entry of a large number of merchant exporters who are linked to fishermen through a chain of small distributors. (Desai and Gopalan, 1983, p.38).

Table 5.1  
OPERATIONAL COST AND PROFITABILITY

Various type of seafoods processed	(for 1 kg. in rupees)				
	Prawns	Pan-frets	Hilsa fish	Seer fish	Gol fish
1. Purchase price of raw material (in Rs./kg.)	25.00	22.00	5.00	6.00	12.00
2. Local Transport charges	0.20	0.20	0.20	0.20	0.20
3. Commission charges for the supplier	2.00	1.00	1.00	1.00	1.00
4. Cost of labour for cleaning and grading	1.00	0.25	0.25	0.25	0.25
5. Electricity charges including ice	1.30	1.30	1.30	1.30	1.30
6. Water charges	0.20	0.20	0.20	0.20	0.20
7. Shipment charges to Bombay	0.75	0.75	0.75	0.75	0.75
8. Cost of weight loss after cleaning	10.00	2.20	0.50	0.60	1.20
9. Total cost per kg.	40.45	27.90	9.20	10.30	16.90
10. FOB Export price	70.00	30.00	17.00	18.00	22.00
11. Net Profit per kg.	29.55	2.10	7.80	7.70	5.00

(Institute of Social Science Trust (ISST), 1984 p.12)

The seafood industry is a 'transitional' industry. Declining catch in one centre is offset by movement of the industry to yet untapped fish landing centres. Within large units, work processes are 'formalised' to a large degree, but hiring of casual women workers is common. Decentralisation of production, putting out of part work processes, loose organisation of work, are among the various strategies used for effecting cost reduction, entry and withdrawal, according to fluctuating exports. (Desai and Gopalan, 1983, p.39).

Women in the fish processing sector are hired at various levels:

1. Contract employment
2. Temporary Workers
3. Casual workers

The work-process in the fish processing industry is organised as follows:

Preparation of raw material: Shrimp/fish is washed with water and salt, and cleaned. Larger varieties of shrimps are deveined and beheaded if necessary. Smaller varieties of shrimp are shelled/peeled by hand.

Grading : Prawns are graded into nearly fifteen to twenty categories depending on their weight and size. Grading skills are acquired on the job by the women workers.

Packing : Graded prawns are weighed and packed in cardboard cartons with ice water. These cartons are then frozen in tunnel/plate freezers at a temperature of  $40^{\circ}\text{C}$ . (Desai and Gopalan, 1983, p.43).



In the fish processing establishments, women workers are involved in cleaning, sorting, shelling, grading and packing shrimps and fish. Experience up to seven to eight years working on grading, yields higher wages. These 'transitional' industries prefer young workers, however, and, therefore, after the peak period there is a decline in earnings. It is profitable for the industry to keep a ready pool of skilled female labour to recruit from.

In West Bengal, too, women and children are involved in the most painful, yet most essential part of prawn processing - the cutting off of the scalps. Cutting off prawn scalps requires much dexterity and patience. The prawn, measuring about four inches in length, is held in the right hand and the left thumb is inserted between the open ends of the shell which encases the prawn head. The scalp, eyes and brain are removed. (Loening, 1984, pg.36).

Most of the production activities are carried out from August to April for 8 months per year. For the women workers at Haroa, West Bengal, the prawn season is from mid April to mid September, only five months of the year. Even during the season, work is irregular. Sometimes, when prawns are scarce, work is available for only a couple of hours. At other times, especially during the full moon, prawns are so abundant that the women have to work at night too. They did not know that night work entitled them to double pay. (Loening, 1984, pg.37).

Women workers, on an average, work for 4 to 8 hours per day. During the fishing season, however, women were very often expected to work 10 to 12 hours a day. Piece

rate workers and women in small informal units were not given regular lunch-breaks, nor were they provided with separate space. The fish processing units were often located in ill-ventilated godown spaces near the docks. Constant usage of ice water contributed to the damp atmosphere. Women performing packing and grading tasks were expected to stand throughout the day. Management were of the view that if the women were seated, they would talk to each other, relax and get distracted from work and result in lower efficiency!! Facilities like drinking water and toilets were not provided in the fisheries units in Bombay. (Desai and Gopalan, 1983,pg.67). Most workers were not given paid weekly off, holidays, annual leave, provident fund, medical insurance or maternity leave.

More than 4,000 to 5,000 fisherwomen from Kerala, work in fish-processing units in Veraval, Gujarat. Most of them are in their early 20's. These are skilled women. Most of them are employed only for 9 months of the year and are paid only Rs.225/- per month; while sometimes, they are not paid for months together. During the season, the girls are made to work from 8 a.m. to 12 p.m. There is larger-scale violation of all legislation, including the Minimum Wages Act and the Interstate Migrant Workers Act. In the fish processing units in Bombay, 60 per cent of the workers were paid on a monthly basis. They earn on an average Rs.14 per day. (Ranadive, 1984, pg.11).

In West Bengal, about a year ago, women earned Rs.4 or Rs.5 a day. A group would sit around one basket that weighed about seven kilos when full. The payment was at the rate of Rs.6/- a basket, and this amount would be



distributed equally amongst the women. The system has now been changed. Now, about 100 women sit in a large circle around the shed and work on several baskets. At the end of the session, payment is distributed equally at the rate of Rs.20 per kilo. The difference between the new and the old system is, however, more apparent than real. (Loening, 1984, pg.37).

In West Bengal, several women worked with babies on their laps. At night, they put the babies to sleep on the ground outside the shed. There is a room for the children behind the shed but no one is employed to look after them. There is no bathroom facility whatsoever. Another work related problem, which the women face, is that of the fishy stink which pervades their clothes and lasts for days even after washing. The women are not given any medication for their hands or any tiffin even when they work long hours. They said that hunger was one of their main problems at work. (Loening, 1984,pg.37).

Most of the women's jobs, as in most other industries, are routine, strenuous and require manual dexterity. Tasks like packing and grading require concentration and constant movement of hands. This makes the work tiring. Besides, women grading shrimps have to stand for long hours in a damp atmosphere. Of the women workers interviewed in Bombay, 51 per cent suffered from fatigue, back ache and leg pain. They also suffered from chest congestion, peeling of skin and skin infection due to bacteria from fish. None of the women workers were provided with masks or hand gloves, nor any first aid. (Desai and Gopalan, 1983, pg.66). The

women workers in Veraval have a constant feeling of a numbing of their fingers due to their being constantly in ice all through the day, without gloves. (Institute of Social Studies Trust, 1984).

Sharp pieces of the prawn's anatomy cut into the hand, leaving it scratched and blistered and invariably drawing blood. Hands, new to the work, get very badly cut and even hardened ones suppurate and bleed when work is heavy. Women complained of burning and stinging pains in the hands, and of being unable to eat rice except with a spoon. "After four days' work, we may even have to take two days off to heal our hands", said Golehar Bidi, a woman nearing 50, who has been doing this work for about 10 years. (Loening, 1984, pg.36).

The operation performed by the women at the cost of such damage to their health is demanded as essential to the industry. The shell, brain and eggs have to be removed without damaging flesh, and the operation has to be perfectly done if the product is to qualify for export, and bring in huge profits and foreign exchange! (Loening, 1984, pg.36).

### Cashew Industry

The cashew industry in Kerala is a major employer of women workers. Ninety per cent of the workforce in this industry comprise of women. The same is true in the Kanyakumari district in Tamil Nadu.

In the cottage-industry, the 'Kudivarappu System', comparable to the "putting-out" system, the wages of women



have been reduced considerably and all the achievements of years of trade-union activities minimum wages, gratuity, leave with wages and maternity benefits, have been denied to them. (Nair,undated, pg.1).

The wages are as low as Rs.1.40 per day. Wages are given only for those nuts which are not broken. The job seems difficult for most of the women. Many of them lose their wages for the day. The piece-rated workers get 65 paise per kilo for whole nuts, and Rs.2/- as dearness allowance. The daily rated workers get Rs.8.86 per day including dearness allowance. The women usually earn not more than Rs.4/- to Rs.5/- per day for work which begins at 8 a.m. and ends at 5p.m. Hence there is large-scale indebtedness. Women in the cashew industry are among the lowest paid workers—76 paise/kg. for shelling, 94 paise/kg. for peeling, 2.25 - 6.82/85 kg. for grading and Rs.7/- per day for packing. (Nair, undated, pg.6). The women's wages constitute the main income or at least the major share of it, in a number of families. Hence, the ill-effects of malnourishment can be expected with such low wages being the major earnings of the family.

In Kanyakumari, where 75,000 women are employed in the cashew industry, they are paid a mere 50 paise per kilogram of kernel. The best worker is able to shell a maximum of 7 kg. or make Rs.3.50 a day. Besides, very often, deductions are made in the already low wages if the extracted kernel is not in one full piece. (Vigilindia, 1980).

The women workers have also to walk long distances and are forced to get up early, complete their house work and then trek long distances to reach their workplaces. In the Kudiavarappu sector, the majority of women workers belong to the Scheduled caste and tribes.

In the cashew industry too, there is a sharp sexual division of labour. Heavy tasks such as loading, unloading and roasting of raw cashewnuts are done by men, while shelling, peeling of nuts, grading and packing by women. (Nair, undated, pg.3).

Of the four operations involved, (shelling, peeling, grading and packing), in cashew processing, shelling of nuts is the most unpleasant job. The shell is often smeared with cashewnut liquid (oil), emitting a pungent smell, and leaving a scalding and corrosive effect on the human skin. The liquid often causes allergy and dermatitis. In all the factories, all the Pulaya and Kurava women are pushed into this 'dirty' job. The oil is very bad for the fingers and that is why dry ash is thrown on the roasted kernels. In spite of this, the women do sustain injuries. The fingers should have no contact with the oil, but contact does take place. (Nair undated, pg.3).

After working in this department for a month, our fingers start burning because of the extra oil coming out when we break the shell on the machine. Boils and abscesses appear on our hands. This oil is very harmful. Some sort of protective oil is given to us to use while breaking the shell, but it is not possible to use it while handling every shell. It takes too much time and doesn't serve any purpose.



The fingers of these women look as though they have been afflicted with leprosy. Protective gloves have not been given to the women. (Ranadive, 1982). Their palms, fingers and feet looked like coconut husks retted in muddy water for months on end. Besides, the roasting of the kernel produces acrid fumes, which cause severe respiratory problems.

The diet of the women workers does not even contain the minimum calorific requirements. Rice and tappoica were the principal starch food items in the diet. Pulses and peas were eaten in far smaller quantities than the minimum protein requirements. The meals include no meat, milk, wheat or fruits. Hence, adults and children seem stunted and underdeveloped. People tend to be diseased and generally unhealthy - constant sickness, emaciation and chronic tiredness. (Nair, undated pg.5).

The Commission visited a Government run cashew factory in Kerala. It was noticed that the above conditions prevailed there also. The women complained that the black fluid from the cashew causes irritation on their fingers and sticks to them. It can be rubbed off only with sand, which was not provided. The women were covered by the ESIS benefits, but only if they worked for 91 days continuously. Most women get work for only 45 days at a stretch. They wanted work for 91 days or, alternately, that the ESIS benefits should cover workers working for 45 days. The women also wanted finger gloves. They sat in a crouching position, with no back-rests. Even the flooring remained uneven. No effort had been made to make a pucca floor as

it was both on a slope and uneven. The women brought a brick or stone to sit on, or to use as a work-table.

In the sorting departments, women who did not have a wall, had nothing to lean on. In a department where women strained off broken nuts and other refuse, the strainer (like a bed) was so low that women had to bend to work on it.

Hence, skin and postural problems were the main health problems in the cashew industry, besides a lack of dependable work.

### Coir Industry

Kerala accounts for about 95 per cent of the total production of coir and coir products in India. India contributes about 60 per cent of the total production of coir. The coir industry is one of the three major traditional industries in the state (the other two being cashew and handlooms) and provides direct employment to 5 lakh people. (Mathew, undated, pg.1).

### Husking

The Commission visited the women at their worksite on the banks of the backwaters in Kerala. The women worked for a daily wage for contractors. They were very poor women and obviously suffered nutritional deficiencies. They used a very primitive tool, a wooden stick, for beating out the coir. As a result, their hands developed lacerations and they experienced burning sensation, while cooking. They also had rheumatism and asthma, as they sat on the damp ground near the backwaters.



There is pollution of the air, due to the soaking of the coconut shells in the water for about 6 months. Because they used extremely primitive tools, their arms and shoulders ached. They had no place of shelter against rain or sun, as they sat on the open ground and worked wherever the coconut shells had been soaked.

The extraction of fibre from the retted husks is extremely hard work and unhygienic. It is almost entirely done by women. (Mathew, undated, pg.2).

### Weaving

The coir-yarn spinners in Tamil Nadu, Andhra Pradesh, Karnataka and Orissa suffer from hand injuries while spinning coir yarn. The injury is caused while controlling the twist and feed by gripping the yarn tighter. The injuries are in the form of linear abrasions of the skin of the palm and fingers. These injuries often bleed and are very painful. As the worker is disabled temporarily by the injuries, the worker is not able to work on all the days of the week, leading to a further loss of wages. "Women and children form the major workforce in coir yarn spinning. Spinning accounts for the bulk of morbidity among women coir workers" (N.I.O.H., 1979, pg.124).

### Rope-making

The Commission visited two rope-making centres, both privately owned. The process involves 3 women, of whom, one spins a wheel while the other 2, pull a thread each, while they walk backwards several yards. These 2 threads are then tied to the other end, and then, with

a crude shuttle, twisted together, while the second wheel is revolved at the opposite end. Young women were employed. In one place, girls at a tender age, including a 10 year old , were employed. The girls must walk several miles a day in the task, but they did not voice any ill-effects. One of them stated that it helped easy delivery. There is a great need to undertake more research in the whole area of work of the coir industry.

A majority of the coir workers find employment only for about 200 days in a year on an average. Theirs is a life of abject poverty, starvation and attendant misery with nothing to fall back upon and nowhere to work for 5 months a year. (Mathew, undated pg.1). The wages are low about Rs.1.50 to Rs.2.50 a day, and there is tremendous under-employment. There has been a process of decentralisation and shift from the organised to the unorganised sector. (Mathew, undated, pg.2). The working and living conditions were miserable. Most workers, including women, were found to be wearing only rags to the place of work. They looked prematurely old. Many girls were dwarfed. (Mathew, undated, pg.4).

#### Health status and problems

A study of health status of coir workers, in the Allepey district of Kerala, indicated an excess morbidity of nearly 10 per cent in males and 11 per cent in females in the coir group, as compared to people not working in the coir industry. It was found that in coir workers, the attributable extra risk for diseases is mainly in the form of skin diseases, respiratory diseases and elephantiasis.



Statistical analysis of the prevalence rates indicate that no particular coir work has a higher risk for diseases, nor any particular coir operation is absolutely free of diseases. Maximum prevalence of asthma and elephantiasis is observed among coir workers, especially those engaged in spinning and weaving, which employ the bulk of workers. (NIOH, 1979).

Among the coir workers, those who were working in a dusty atmosphere were found to be most affected by respiratory diseases. Sulphurdioxide, used for the bleaching of mats, along with the coir dust, has been indicated to be harmful. Among the coir operations, the operation of shearing is visibly dusty. However, respiratory illness was observed more frequently in workers engaged in spinning and weaving operations. In the dyeing section, the workers faced the risk from exposure to various dyes. (NIOH, 1980).

A study of 418 workers, including 25 per cent of women, indicated that the major complaints (29 per cent) of coir workers were respiratory and cardiovascular, such as cough, expectoration, dyspnoea, precordial pain, palpitation, haemoptysis, either alone or in combination. About 20 per cent of the total number of female workers had gynaecological complaints in some form or another. On general examination, it was found, that 27.5 per cent were anaemic and 11.5 per cent had elephantiasis. Eight workers (1.9 per cent) had varicose veins and all these workers were mat weavers. Hyperkeratosis and callosity were present in 14.5 per cent of the total number of workers. Detailed clinical examination showed the incidence of respiratory (5.6 per cent), cardiovascular (1.9 per cent), neurological (0.95 per cent) and skin (9.8 per cent) disorders.

The prevalence of leprosy was also very high. The prevalence of elephantiasis was very high among coir workers. It was especially high among the female coir workers. Among the women coir workers, the incidence was higher among those who are engaged in operations like beating, spinning and retting. (NIOH, 1981).

Table 5.2

ASSOCIATION BETWEEN VARIOUS OCCUPATIONAL GROUPS  
WITH REGARDS TO PREVALENCE OF ELEPHANTIASIS

Group	Corrected $\chi^2$	P Value
Coir Vs. Control - Males	1.299	$> 0.2$
Non-coir Vs. Control - Males	0.738	$> 0.3$
Coir Vs. Non-coir - Males	4.888	$< 0.05$
Coir + Non-coir Vs. Control - Males	0.013	$> 0.9$
Coir Vs. Control - Females	5.772	$< 0.02$
Non-coir Vs. Control-Females	0.073	$> 0.7$
Coir Vs. Non-coir-Females	6.640	$< 0.01$
Coir Vs. Non-coir + Control - Females	12.267	$< 0.001$
Males Vs. Females	0.42	$> 0.05$

(National Institute of Occupational Health, 1981, pg. 157).



Table 5.3  
AGE, SEX AND OCCUPATIONWISE BREAK UP OF THE PREVALENCE OF ELEPHANTIASIS  
(Expressed as Rate per cent)

Age Group (years)	COIR			NON-COIR			CONTROL		
	M	F	T	M	F	T	M	F	T
11 - 15	-	-	-	4.17% 48	2.56% 39	3.45% 87	-	-	-
	3	12	15				7	15	22
16 - 20	-	10.64% 47	9.80% 51	3.85% 26	-	2.17% 46	6.67% 15	-	3.57% 28
	4				20			13	
21-- 40	3.57% 28	7.97% 138	7.23% 166	4.44% 90	-	3.42% 117	5.25% 19	-	1.72% 58
					27			39	
41 - 60	25.00% 12	21.25% 80	21.74% 92	-	11.11% 9	2.50% 40	11.76% 17	14.29% 7	12.50% 24
Above 60	45.45% 11	19.44% 36	26.67% 47	25.00% 20	25.00% 4	25.00% 24	11.11% 9	25.00% 4	15.38% 13
TOTAL*	16.36% 55	13.29% 301	13.76% 356	5.99% 167	3.33% 60	5.29% 227	8.33% 60	3.17% 63	5.69% 123

M = Male ; F = Female ; T = Total

\* Only age group above 15 years are included for rate per cent.

The figures given below rate per cent represent the total number of individuals in the particular age group.

(National Institute of Occupational Health, 1981,pg.156).

Mechanization has been a very continuous trend in the coir industry in the recent period. The number of women workers in coir factories has been on a continuous decline. (Mathew, undated, pg.3).

Studies show that it is possible to give better wages to the workers, if the middlemen and the monopoly elements who control the husk are removed from the scene, the supply of husk is ensured at control prices and reasonable floor prices for coir, a proper distribution of benefits should be ensured to the workers. (Mathew, undated,pg.6).

### Food Processing Industry

The food processing industry or the food products industry, consists of about six lakh units, with only 27 per cent units located in the urban areas. These units are classified into household, and non-household industry, which account for 48 per cent and 52 per cent of total units respectively. Unregistered units predominate in this sector, accounting for 95 per cent of the non-household sector. Even in the registered sector, in terms of employment generated, 55 per cent of units operating on small-scale, hired 14 per cent of all workers. According to the 1971 census figures, 15,39,308 workers were employed in the food products industry. This sector employed 9 per cent of the total persons working in the manufacturing sector. The break-up of employment was as follows:

Household sector	- 4,14,647(27 per cent)
Non-household sector	-11,24,661(73 per cent)
(Desai and Gopalan, 1983,pg.13)	



However, as these industries are gradually mechanised, from the year 1911, there has been a gradual decline in the number of women employed in these industries. Even so, 40 per cent of the workforce of this industry consists of women workers. (Desai and Gopalan, 1983, pg.14)

#### a) Spice-industry

Trading in whole spices has been a major activity in this country for centuries. From the 1960s, there has been an increase in the share of ground spices or masala to cater to a growing Indian population abroad. The value of exports has grown from Rs.16 crore in 1960 to Rs.165 crore in 1980. The share of spices in the total exports is 2.8 per cent. The domestic consumption has also increased substantially. Thus the production of spices is a profitable industry. (Desai and Gopalan, 1983, pg.26).

However 90 per cent of the total units, even in cities like Bombay, belong to the non-factory sector, where there is neither security of employment, nor the minimum facilities at work.

The grinding of the spices and the masala is carried out by 'chakkis' or pulverisers. There is scope for the use of machinery for other processes too - drying, roasting and the mixing of spices. However the pounding of the masala by hand is the norm in smaller units. Women are usually involved in three not so clearly differentiated task groups - preparation of raw material; packing of final products and mixing of ground spices. (Desai and Gopalan, 1983).

Women are relegated to jobs which are routine, strenuous and which require manual dexterity. Tasks like packing and grading require concentration and constant movement of the hands. A large proportion of women in this industry are single women - unmarried, deserted or widowed, and often heads of households. Yet their earnings are very low. The average wage rates in a city like Bombay were Rs.8.54 per day.

Most units are ill-ventilated, located in old buildings, in congested areas. The rooms are overcrowded and the air is full of spice-dust. Thirty per cent of the units in Bombay did not have either drinking water facilities nor accessible toilets. There were no separate toilets in any of the units. The women had no benefits, including that of paid holidays. (Desai and Gopalan, 1983, pg.67).

The grinders and packers of spices are exposed throughout their working hours to the irritating effect of dispersed spices in contact with the skin and with the mucous membrane of the eyes, the respiratory and the digestive organs. Many people working with these spices, suffer from chronic conjunctivitis and chronic rhinitis. Allergic skin diseases are also prevalent. After prolonged exposure, respiratory infections, particularly chronic bronchitis and sometimes even bronchial asthma may develop. Workers engaged in the processing of spices often complain of digestive disorders. This may be due to the inflammation of the gastric mucosa, or at least the superficial irritation of the gastric mucosa. (International Labour Organisation, 1983, pg.2091).



The women workers in the spice-processing industry in Bombay suffered from chest congestion, frequent headaches, burning of eyes, skin problems like heat blisters, peeling of their skin and of their palms. Thirty-two percent of them also complained of extreme fatigue. (Desai and Gopalan, 1983, pg.66).

#### b) Papad-making

In this 'industry', the operations are entirely manual—the making of the dough, the kneading, the rolling of the papads, drying of the papads, weighing and packing. The use of even the simple machinery is restricted to the packing processes. Here too women are relegated to jobs which are routine, strenuous and require manual dexterity. Tasks like packing and grading require concentration and constant movement of the hands. With age, weariness increases, but since many of the older women are not literate, they cannot afford to change jobs as they have no other outlets. (Desai and Gopalan, 1983 , pg.61).

In the Bombay papad units, the highest proportion of women workers, ie. 35 per cent, are either widowed or separated women. They are usually hired on a piece-rate basis and work 6 to 12 hours a day subject to other seasonal work available. In the Bombay units, the average wage was Rs.7.14 per day. Most units in the preparation of papad were ill-ventilated, and located in old buildings in congested area , resulting in overcrowding of workers. Thirty per cent of the workers in the Bombay units are not provided with either drinking water or accessible toilets. None of the units have separate toilets for women workers. (Desai and Gopalan, 1983,pg.67).

Seventy per cent of the women workers in the Bombay units suffered from fatigue, backache and leg pain. They also complained of skin problems and burning of eyes. The older women felt that it was the routine and repetitive nature of their work which they found tiring. Eight-eight per cent of the women felt their work physically tiring. (Desai and Gopalan, 1983, pg.65-67).

### c) Pickle-industry

In this 'industry' too, the processes involved are largely manual. The women workers are involved in three operations: preparation of raw material, packing of the final products and the mixing of the pickle. A large section is also involved in cutting, cleaning, and sorting/grading of fruits and vegetables. This work is largely seasonal and continues for short periods. Here too, women do work which is routine, strenuous and requires manual dexterity. Tasks like packing and grading require concentration and constant movement of the hands. (Desai and Gopalan, 1983).

Bad ventilation, congestion and overcrowdedness is a feature of most of the units in the pickle industry. Lack of drinking water and toilet facilities are some of the other features. The women are of 'temporary' status and enjoy no paid holidays. The average wages in Bombay were Rs.7.34 per day. Thirty-six per cent of the women workers in the Bombay units complained of fatigue, backaches and leg pains. They also suffered from skin problems and burning of the eyes. (Desai and Gopalan, 1983, pg.65-67).



## Wool Processing

In all the departments involved in wool production, there are high concentrations of total as well as respirable dusts, especially wool dust. The workers, therefore, suffer from respiratory allergies, like allergic rhinitis and allergic bronchitis. They also suffer from pulmonary tuberculosis. Prevalence of prominent bronchovascular markings and high absolute eosinophil counts were also present in the workers examined by the team of the National Institute of Occupational Health. The prevalence of tuberculosis was found to increase, with increase in the duration of work. Compared to the controls in the NIOH Study, a greater proportion of the wool workers had respiratory symptoms, even though they were of a much younger age group. "The high prevalence of chronic bronchitis and bronchitis in wool workers may be due to the irritative effects of wool dust on bronchial mucosa". (National Institute of Occupational Health, 1984, pg.90).

## Woollen Carpet Industry

There are about two lakh workers employed in the carpet weaving industry in the country. The main centres of this craft are Bhadohi and Mirzapur in Uttar Pradesh, Jaipur in Rajasthan, and Srinagar in Jammu and Kashmir. Other places, where carpets are woven, are in the States of Madhya Pradesh, Andhra Pradesh and Punjab. (National Institute of Occupational Health, 1981, pg.82).

## Work-process

The processes involved in carpet weaving are as follows:

1. Manual sorting of wool.
2. Carding and spinning on a card machine.
3. Dyeing: acid and chrome dyes are used. The wool fibre is boiled in a vat containing acetic acid and dye solution and then it is washed in tap water and dried.
4. Spindle making.
5. Weaving: weaving is done on hand operated looms in a squatting posture and knots are tied and cut.
6. Clipping, embossing and carving out designs.
7. Mending and edge binding.
8. Chemical washing for finishing: carpets are washed with diluted sodium hydroxide solution, soap and water.

(National Institute of Occupational Health, 1981, pg.82).

### Health problems

Various organic dusts have been known to cause disease. Cotton and jute fibres have been identified as causing chronic bronchitis. There have been very few studies on the effects of wool fibre. Though wool fibre is chemically inert, the dust may cause harm to the lungs and, being a protein, may provoke an allergic response. Preliminary reports have suggested that inhalation of wool fibres is associated with a higher prevalence of chronic bronchitis. (NIOH, 1981, pg.82 and 83).

In a medical study conducted by the NIOH, the health problems of the wollen carpet industry were found to be: (NIOH, 1981, pg.86).



Table 5.4  
PERCENTAGE DISTRIBUTION OF SYMPTOMS

Symptoms	Control (n=50)	Exposed (n=100)
Chronic cough with and without expectoration**	12.0	34.0
Breathlessness*	10.0	18.0
Pain in chest with cough/resp.	22.0	26.0
Tightness in Chest	-	4.0
Haemoptysis	4.0	3.0
Upper respiratory complaints	34.0	30.0
Low backache**	10.0	48.0
Joint pains**(Knee, Elbow, Finger)	10.0	31.0
Others <sup>+</sup>	30.0	36.0

+ Weakness, Malaise, Loss of weight, Transient dizziness on standing after work. Eye symptoms (burning, heaviness, stickiness)

\*\*  $P < 0.01$  compared to respective controls.

\*  $P < 0.05$  compared to respective controls.

Source: National Institute of Occupational Health, 1981, pg.86).

The above table shows the percentage distribution of symptoms in the exposed and control groups. Respiratory complaints like chronic cough, with or without expectoration, were present in 34 per cent of the exposed and 12 per cent of the controls. Four per cent of the exposed and none of the controls experienced a feeling of tightness in the chest at the time of work. Breathlessness

was experienced by 18 per cent of the exposed and 10 per cent of the controls. Low back pain was the complaint of 48 per cent of those exposed and 10 per cent of the controls. Joint pains (knee, shoulder, elbow, fingers) too were significantly higher in the exposed than in the control groups. General complaints like weakness, malaise, loss of weight, transient dizziness on standing after prolonged work and eye complaints (burning, sickness and heaviness) were seen in 36 per cent of the exposed and 30 per cent of the controls. (NIOH, 1981, pg. 86). On the visit of the National Commission to carpet weaving centres, in Kashmir, the weavers did not make any obvious connection with their health problems and their work. However, the great strain on their eyes was evident due to the poor lighting in the centres, even supported by the Government. The windows were too small, the roofs low and electric/tube lights poorly placed.

The following tables show the prevalence of diseases in the exposed and control groups. Chronic bronchitis and emphysema were present in 17 per cent of the exposed and 4 per cent of the controls. Fifteen per cent of those exposed and 4 per cent of the controls with chronic bronchitis had evidence of airways obstruction on pulmonary function tests. Interstitial fibrosis, which is a suspected wool allergy, was found in 4 per cent and bronchial asthma in one per cent. They were exclusively found in the exposed group. Postural backache was present in 48 per cent of the exposed and 10 per cent of the controls.



Table 5.5  
PREVALENCE OF DISEASES IN PERCENTAGES

Diseases	Control (n=50)	Exposed (n=100)
Chronic bronchitis/emphysema <sup>+</sup>	4.0	17.0*
Interstitial fibrosis	Nil	4.0
Wool allergy	Nil	4.0
Bronchial asthma	Nil	1.0
Bronchiectasis	12.0	13.0
Pulmonary tuberculosis <sup>++</sup>	24.0	18.0
Other respiratory diseases <sup>+++</sup>	Nil	2.0
Postural low backache	10.0	48.0**
Other diseases <sup>++++</sup>	18.0	14.0

+ 4 per cent controls and 15 per cent exposed had evidence of airways obstruction.

++ 6 per cent controls and 4 per cent exposed had clinical and radiological evidence of diseases. Rest had only X-ray evidence.

+++ Partial collapse of the left lower lobe, bronchogenic carcinoma

++++ Hypertension, mitral regurgitation, old cerebral thrombosis, hyperacidity and eczematous dermatitis.

\*  $P < 0.05$  compared to respective controls

\*\*  $P < 0.01$  compared to respective controls

Source: National Institute of Occupational Health, 1981, pg.87.

It was observed that symptoms like cough with and without expectoration, breathlessness, tightness in chest, low backache and joint pains were significantly higher in

the exposed subjects. This indicated a higher prevalence of respiratory and postural problems in exposed workers. This finding is supported by the observations of Zuskin, (1976), who reported a higher prevalence of chronic respiratory symptoms in the workers exposed to wool dust for more than 10 years, than those with less than 10 years of exposure. The distribution of respiratory and other diseases showed that chronic bronchitis and emphysema, suspected wool allergy, interstitial fibrosis, bronchial asthma and low backache and joint pains were present in a significantly higher number of exposed workers."(NIOH,1981).

Chronic bronchitis and emphysema were present in 17 per cent exposed and 4 per cent control subjects. Fifteen exposed and two control subjects, with chronic bronchitis, showed evidence of airway obstruction on pulmonary function tests. The age and sex distribution of workers showed that in both the groups, chronic bronchitis was present in subjects above 40 years of age and the prevalence increased with increasing age in the exposed subjects. (NIOH,1981).

Among the non-respiratory diseases, postural backache and joint pains were significantly higher in the exposed than in the controls. Though the prevalence increased with increasing age, a significant number of exposed workers had backache in the lowest age group of 20-39 years. The prevalence of backache increased with increasing duration of work in the carpet industry, being highest at 50 years and above. Workers in all the departments had a significant prevalence of backache, though the



carding, washing, sorting and yarn drying departments had a higher prevalence. This could be due to the work posture in all the departments of the carpet industry involving prolonged squatting, bending and stooping postures; joint pains followed the same pattern as low backache. (NIOH, 1981).

### Tobacco Processing

The main operations in this industry consist of pulverising of dried tobacco leaves, sizing and filling up the tobacco in large bags. The main health problems experienced were symptoms like nausea, giddiness, vomiting, headache, tiredness, loss of appetite and weakness. The excretion rates of nicotine and cotinine were higher among the workers. (National Institute of Occupational Health, 1981, pg.44).

A medical examination indicated that 69 workers from 2 factories in Nadiad district in Gujarat, had symptoms like vomiting, giddiness, headaches, tiredness and loss of appetite, X-ray examination of the workers revealed 5 cases of tuberculosis and 5 cases of other respiratory diseases like emphysema and bronchiectasis. (NIOH, 1981, pg.43). The women workers revealed significant peripheral airway obstruction. Most symptoms indicate that the work result in "mild nicotine toxicity". (NIOH, 1981, pg.48).

### Matches and Fireworks

Fifty per cent of the matches and seventy-five per cent of the fireworks of the country, are produced in Sivakasi, in the drought-prone district of Ramnathpuram,

in Tamil Nadu. The match industry contributes 120 crore rupees per year, and the fireworks industry, 18-20 crore per year, to the national exchequer. (Kothari, 1983).

In the Sivakasi area, the total population is about 3 lakhs, of which, 1 lakh work in these industries. Small match-production units number 1432. Of the one lakh workers, 45,000 are girls and boys below the age of 15.

The company buses from the factories, come into the villages, to take the children, between 3 to 5 p.m. Half-sleepy children, about 150 to 200 in each bus, come to the factories and work upto 6 to 9 p.m. Most children work over 12 hours every day. The parents are usually paid an advance of Rs.200/- which is gradually deducted from their wages. (Kothari, 1983).

Children from the ages of  $3\frac{1}{2}$  years work in these factories, making boxes, counting mathes and sticking labels. Most of these children have never seen a school. Most of the children are piece-rated. They are paid much less than the legal minimum wages. They are paid barely Rs.2/- per day. Older children are paid about Rs.6/- per day. (Kothari, 1983).

Almost every manufacturer has his own formula for the composition of the ignitable paste. Potassium Chlorate is used with tetraphosphorus trisulphide, possibly with an admixture of manganese dioxide for heading strike anywhere matches; safety matches are headed with potassium chlorate, and antimony trisulphide; and sand, powdered glass or a similar material is mixed with red



phosphorus to make the friction strip for safety matches. Some pastes may also contain lead tetroxide. Various substances are used as fillers, binders and adhesives e.g. zinc oxide, calcium sulphate hemihydrate, asbestos powder, infusorial earth, gum arabic etc. (International Labour Organisation, 1983,pg.1286).

In making wooden splints, the timber is first cross-sawn into blocks which are then divided into strips on peeling machines: this veneer is then sliced into widths and cut into splints of the required length by a guillotine and a series of lancets set at right angles. The splints are then impregnated in a bath of ammonium phosphate or boric acid (to prevent afterglow) and dried and polished in a revolving drum; next they are coated with paraffin wax (to assist burning) and after this the previously prepared igniting compound is applied to the heads. In the automatic process, the splints are held perpendicularly in a perforated metal plate for dipping; the earlier method was to hold them in frames. After drying, the matches fall automatically into slots, the same size as a match box. The boxes are filled and packed into containers; filling is done by hand in some places.

In making wax matches, paper or cotton filaments are drawn through a succession of wax baths and die plates until the desired thickness is obtained, then cut into stems and conveyed over a dipping roller which coats the ends with the prepared paste.

In making book matches, a roll of pre-impregnated card is fed into a machine which cuts it into "combs" of 60 match splints. These are then paraffined, dried, dipped in the igniting compound and dried again. The large comb is then separated in a slitting machine into combs of 10-match width. These are stapled between the fold of a previously printed cover.

Most match boxes are now made from wood veneers but some are still made from cardboard; box making is usually mechanised and, in some parts, it may still be carried out as home work. Boxes everywhere are decorated or printed in some fashion; label making is an important ancillary process and the relevant department will be fitted with rotary printing presses, guillotines, etc.

In most match works, large numbers of women and girls are employed although the total numbers of workers employed are much reduced when automatic machines are used. (International Labour Organisation, 1983, pg.1286).

The working conditions in these factories are extremely unsafe and hazardous. They work in cramped environments with hazardous chemicals and inadequate ventilation. Dust from chemical powders and strong vapours in both the store room and bath room are obvious at every site. (Society for Participatory Research in Asia, undated, pg.28).

The risk of fire and explosion is ever present in the match industry but there are also numerous machinery hazards and health hazards due to the inhalation of dust and fumes. There is a high fire and explosion risk in the mixing of pastes and in the handling of headed matches. This risk is greater where boxes are hand filled or materials and boxes are manually handled. All possible sources of ignition and friction should be eliminated. Good housekeeping, maintenance of gangways and exits, the provision of fire alarms, sprinkler systems, fire extinguishers and fire-resisting personal protective



equipment and training in fire drills are all necessary to minimise the risk and to deal swiftly with any outbreak. (ILO, 1983, pg.1287).

Burns are a constant risk where there is manual handling of materials or matches. The character of the burn may vary with the type of paste.

Accidents: The common dangers from unguarded driving mechanisms, flywheels, belts, pulleys, in-running gears, should be prevented by well maintained machinery guarding. Guillotine and splitting knives and nips of rollers also require secure guarding. In the printing of labels the risks are the same as in any letterpress printing works and the guarding should be of the best known standard in that trade. (International Labour Organisation, 1983, pg.1287). Highly explosive materials are handled causing frequent explosions and fires, killing and disabling hundreds of workers. In September, 1981, and February, 1982 there were several major fires and explosions in factories near Sivakasi causing 38 burn deaths, (Kothari, 1983). There have been many more before and after these incidents.

Although the greatest danger has been removed by the banning of white phosphorus, the dust and fumes of many of the materials used still present a hazard, especially in storerooms and in the preparation of paste. (International Labour Organisation, 1983, pg.1286).

Besides, several dangerous chemicals are handled:

Zinc Oxide (which causes metal fume fever after being absorbed through the lungs and respiratory system), Antimony (which can

cause eye irritation, sore throat, headache, nausea, vomiting, diarrhoea) and phosphorous (which can cause phossy jaw and damage to bones). (Society for Participatory Research in Asia, undated, pg.28).

Dermatitis is a risk at many stages of manufacture, especially where manual handling persists as when troughs are replenished with combustible paste. (International Labour Organisation, 1983, pg.1287). Workers are also often exposed to excessive heat from drying stoves. Women employed in filling boxes and in packing and labelling suffer discomfort and postural defects. Women often complain of backaches. (International Labour Organisation, 1983, pg.1287).

### Khadi Spinning and Weaving

Khadi production in the country is mostly handled by agencies like the Gandhi Smarak Nidhi, the Sarvodaya, the Khadi and Village Industries Commission and the Khadi Board. According to one report, there are about 15 lakh people working for these organisations, spinning and weaving khadi. (John, 1985, pg.45).

According to another report, there are a total of 7,11,340 spinners and 73,880 weavers in the country, engaged in cotton, woollen or silk work. Spinners are concentrated mostly in UP (about 2 lakh), in Bihar (about 1,62,000) and in Tamil Nadu (over 1 lakh). The weavers are in Uttar Pradesh (16,000), in Bihar (10,000) and in Andhra Pradesh (7,000). (Department of Science and Technology, 1984, pg.7).



Their average monthly earnings are Rs.100/- only. Their daily working hours are from 8 a.m. to 4 p.m. six days a week. They can work on Sundays too if they want to earn the three extra rupees which enable them to eat on all days of the week. (John, 1985, pg.45).

Most institutions producing Khadi come under the Charitable Institutions Act. Hence, the employees are not entitled to any definite pay scales, nor do they get any benefits. In Kerala, only girls work in the 65 production centres run by Gandhian Institutions. (John, 1985,pg.45).

The weavers have to buy cotton from the Centre for the thread needed to weave the khadi, which is deducted from their wages. The girls have to wear Khadi when they come to work. They are prohibited from working for other cotton mills. Besides, eight per cent of their earnings are cut as contribution to a "Welfare Fund". To claim from the fund, they have to work for three years. (John, 1985, pg.45).

Apart from the extremely low wages and the insecurity of employment, the women face health problems related to their continuous posture at spinning or weaving. When the Commission visited some weavers in Kashmir, they mentioned that the continuous twisting of the thread on their thumb and index fingers, and turning the wheel causes pain in arms and shoulders. They also complained of very low returns in wages - about Rs.5/- per day.

In tussar-spinning, the Commission observed the crude process of unravelling the thread from the pupa by

rolling the thread on the woman's thigh. Constant friction makes the skin of the thigh red and hard. A covering had been tried, but rejected by the workers. Research into appropriate shields and other methods, need to be initiated.

### Garment Industry

The garment industry is an important export-oriented industry and the labour of the garment workers all over the country, brings in precious foreign exchange for the country. The export-processing zone is one important area of the garment industry.

Another important area is the capital. Around 25,000 to 1,00,000 women are employed in the garment factories in Delhi. Most of these too are ready-made garment export factories. The official minimum wage in the Delhi garment industry is Rs.11.66 per day. What the women are forced to take however, is far less between Rs.3/- and Rs.4/-. (Rao, 1987, pg.1).

The problems of the women workers vary according to the nature of the production process they work on. Secondly, the nature of the workplace determines the pace of work and the physical working conditions. In the large companies, women work on assembly lines. They experience great stress on the production lines. They also work in cramped conditions in rooms which have extremely high temperatures. In a jean-manufacturing company, women were also employed to iron the finished garments on an assembly line basis. Many women were known to have fainted due to the heat and humidity in the atmosphere. Strict supervision meant that they could not get adequate rest periods, nor could they breathe



fresh air. In another factory, in Delhi itself, the working area was comparatively more pleasant, but the factory clinic reported on an average 100 cases a day of persons with problems such as headaches, and fainting spells. (Rao, 1987, pg.2).

The large factories usually provided toilets, but no creche facilities. Lack of child-care was a source of great stress and strain for women. Women employed in small workplaces worked in poor light, often sitting crouched on the floor. There were no clean toilets. A large number of women reported that they did not use the toilets, the whole day. Hence, they ate and drank very little during the day, leading to other negative consequences. Eye-sight and postural problems were the major complaints.

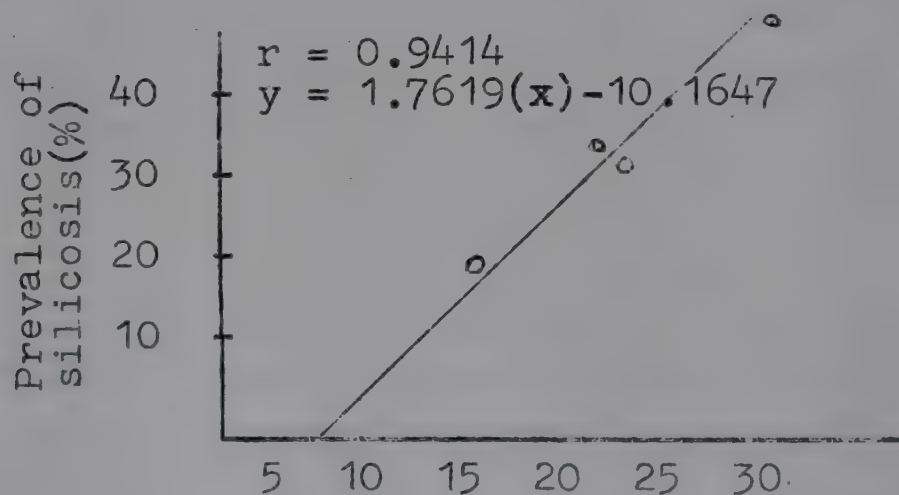
As a rule, most companies only employ unmarried girls. They are forced to give up their job if married. This implies that many young women cannot marry when they are supporting their families. This often leads to a great deal of stress in the family. (Rao, 1987, pg.2).

The Commission visited a garment factory in the free trade zone of Kandla. Unmarried, young women were employed. Most jobs required standing for long hours. Salaries were from Rs.270/- to Rs.450/-, for those who had worked for a long period. The women came from the villages by bus, arranged by the management. The major exploitation, as in all free trade zones, was low wages, due to competition in getting global tenders. It is questionable whether there is any gain to the wage-sector in India through these zones. There was no canteen in the whole zone, so there was no access to food, except what they could bring from home.

### Ceramic and Pottery Industry

In the ceramic and pottery industry, operations like grinding and glaze spraying were identified as the most dusty and hazardous operations. Inhalation of free silica dust for long periods causes fibrosis of lungs. Tuberculosis is the most common complication of silicosis. Fibrosis due to silicosis leads to restrictive type of impairment of lung function. (National Institute of Occupational Health, 1981).

In a study of silicosis in female ceramic workers in 1956, 3 cases of radiological evidence of silicosis associated with a loss of VC\* were observed. A close association exists between the duration of work in the potteries, and the prevalence of silicosis. Prevalence of silicosis was closely related to the respirable dust concentrations and its free silica content. (NIOH, 1981).



Duration of Exposure to Free Silica Dust

$P < 0.05$

(NIOH, 1981, pg.58).

Showing relationship between duration of exposure to free silica dust and prevalence of silicosis.

\*VC - Vital Capacity



### Soap Industry

An important process in the making of soap is the boiling of fats and caustic soda and allowing them to react. The main problems of workers in this industry is burns and scalds. The workers suffer from chemical burns, occupational allergy and problems of ventilation and high temperature. (DST, 1984, pg.10).

### Slate-Pencil Making

In Mandsaar district in Madhya Pradesh, there are about 90 slate pencil cutting units. There are about 732 workers both men and women, working in these units.

In the factory, the cutting of the stone - Binota-shale - is done with electrically operated steel saw. After the initial preparation of blocks of suitable size, pencils of required size and thickness are made by cutting deep grooves over the blocks with electrical saws by the cutter. The subsequent operations of separating, counting and packing the slate pencils is done by the other workers. Many female workers are employed for rolling (finishing) of pencils and work in their homes. (National Institute of Occupational Health, 1982, pg.31).

The operation of cutting the stone is a dry process and, during cutting, dust is generated in clouds and pervades the factory atmosphere in which the work is carried out. The cutters are at a special risk, principally because the stream of dust, arising during cutting, is directed towards their face, and because they are closest to the source of generation of the dust. The general

ventilation in most of the factories was poor. (National Institute of Occupational Health, 1982, pg.31).

A monitoring of dust concentrations in the work environment indicated that the dust levels were alarmingly high in the breathing zone of the cutters, as well as in the general work environment. The dust levels were much higher than the recommended Threshold Limit Value (TLV).

Table 5.6

## DISTRIBUTION OF SYMPTOMS IN DIFFERENT EXPOSURE GROUPS

Symptoms	Cutters (males) (n=414)	Males Exposed GWE. (n=119)	Female exposed to GWE (n=72)	Total (n=605)
Cough (dry)	19 ( 4.59)	3 ( 2.52)	8 (11.11)	30 ( 4.96)
Cough with Exp.	142 (34.30)	30 (25.21)	20 (27.18)	192 (31.74)
Breathlessness (all grades)	215 (51.93)	39 (32.77)	32 (44.44)	286 (47.27)
Cough with Exp. & breathlessness	128 (30.91)	22 (18.48)	17 (23.61)	167 (27.60)
Haemoptysis	25 ( 6.04)	4 ( 3.36)	6 ( 8.33)	35 ( 5.79)
Chest pain	123 (29.71)	18 (15.13)	18 (25.00)	159 (26.28)
Weight loss	80 (19.32)	14 (11.76)	14 (19.44)	108 (17.85)
No. of subjects showing any of respiratory symptoms	252 (61.43)	47 (39.49)	37 (51.39)	336 (55.54)

GWE = General Work Environment.

n = Number of subjects.

Figures in parenthesis indicate percentages

(National Institute of Occupational Health, Annual Report, 1982, pg.39).



The above table shows the prevalence of respiratory symptoms among the various exposure groups. It is seen from this table that prevalence of respiratory symptoms is 55.5 per cent among the slate pencil workers as a whole. It is also seen that the commonest symptoms are breathlessness and cough with expectoration, either alone or in combination with each other. Breathlessness in silicosis is brought about by fibrosis of the lungs, while cough and expectoration result from irritation of bronchial mucosa by the dust. The various physical signs noted were clubbing of fingers (12 per cent), diminished chest movements (30 per cent), crepitations (20 per cent), diminished breath sounds (10 per cent) and rhonchi (9 per cent). (National Institute of Occupational Health, 1982, pg.35).

Three hundred and twenty four (54.65 per cent) of slate pencil workers showed evidence of silicosis radiologically. This is very high as compared to the earlier prevalence found in other studies on silicosis carried out in our country (Gupta, et al, 1969, and 1972). However, the results are comparable to the earlier study carried out in this industry by Jain et al (1977), who reported about 57 per cent of overall prevalence of silicosis. Of the 324 cases discovered in the present study, 219 cases showed an evidence of only small opacities, 4 cases showed an evidence of only large opacities, and 101 cases showed the evidence of both small and large opacities. The large opacities (category A,B and C) signify the development of conglomerate silicosis (Parkes, 1980). Because the prognosis is worse in such cases, in subsequent presentation the cases showing mixed opacities are classified under conglomerate silicosis. Other significant abnormalities recorded in the X-rays were, egg shell calcification of pulmonary lymphnodes, pleural thickening, tuberculosis and emphysema. (NIOH, 1982 pg.35 and 36).

Out of the 593 workers examined by the NIOH, 30.7 per cent showed impairment of pulmonary functions, which consists of restrictive, obstructive and a combination of restrictive, and obstructive type. It was also observed that there was an association between the pulmonary function impairment and duration of exposure to the dust, symptoms and radiological evidence of silicosis. (NIOH,1982).

The overall prevalence of silicosis among the 593 workers examined, was 54.65 per cent with 17.7 per cent of the workers suffering from conglomerate silicosis. Fifty per cent of them were below the age of 25 years. There is an increase in the prevalence of silicosis with increase in the severity and duration of exposure. After about twenty years of exposure, not a single worker is free from silicosis. (NIOH,1982).

Fifty per cent of the cases of conglomerate silicosis occur in workers below the age of 35 years. High prevalence of silicosis among young workers is apparently due to initiation to work at an early age, combined with a relatively short latent period due to high dust concentrations in the occupational environment. (NIOH,1982, pg.36).

In the NIOH medical study of 279 slate pencil workers, 23 workers who had participated in the study were killed by the silica dust during the follow-up. The mean age of the workers who died was 34.65 years and their mean duration of exposure was 11.75 years. All the workers were suffering from conglomerate silicosis. (NIOH,1983, pg.48).

Not a single cutter who has been working for more than 20 years in the industry could be traced by the NIOH survey team. In fact, the workers in Mandsaur have noted



more than 3,000 deaths of slate pencil workers in the last decade. Most of these deaths were of young workers. (Society for Participatory Research in Asia, 1984,pg.2).

### Glass Industry

In the small and medium sized glass factories producing electric tubes and lamps, women are employed in certain departments like assembly, and packing.

In the Sonapat industrial belt of Haryana, more than 100 young girls are employed in the glass industry. They work two shifts of eight hours each. Salaries are low, ranging from Rs.200 to 500. A girl who had worked for four years said that her salary now is Rs.467/-, though after some deductions she gets Rs.350/-. Another who had worked for a few months said that her salary was Rs.285/- per month while her actual take-home pay is only around Rs.250/-. Sometimes, arbitrary deductions are made so that the take-home pay is even lower. (Dogra, 1987).

On the days these girls do overtime, they have to work for as many as 12 to 16 hours. There have been days when girls have left their homes at 5 a.m. and returned after 10 p.m. Moreover, almost all the work has to be done standing, with very small rest intervals thrown in. Despite this, no rest-room or other facilities have been provided for the girls. In fact, they are not even supposed to sit on the lawn. (Dogra, 1987).

Workers face extreme thermal stress in the summer. The girls often suffer from cuts and burn injuries. Many

●f these injuries were of a serious nature requiring stitches or long-term treatment. The managements do their utmost to hush up the cases and do not allow accident reports to be lodged. No compensations were made for any of the injuries, nor was proper first-aid and medication provided.

The behaviour of the supervisory staff, as well as of some of the male workers, is insulting and humiliating towards the girls. Lastly, a very discriminatory type of injustice that the girls suffer is that they are forced to resign at the time of their marriage (generally a month or so before this). In very rare cases a few girls retain their jobs after marriage, because of connections or influence. (Dogra, 1987).

#### Small-scale Pharmaceutical Industry

The last ten years have seen a phenomenal increase in the production of pharmaceutical companies and of newer industrial centres. Many more liquid orals, tablets, vials, ampoules have been thrown into the market. This is leading, not to increase in employment, but to the extraction of more work from less or the same number of workers. The impact of this process is increasingly being felt by the women on the packing lines. (Gothoskar and Banaji, 1984).

Together with this, is the process of farming out work to small industries, especially in small towns. Even in bigger cities, there is the phenomenon of huge industrial estates, where, in a single building, are situated



hundreds of small factories, employing about 10 to 15 workers, especially young women. It is estimated that there are about 3,000 to 4,000 small pharmaceutical plants in Maharashtra alone. (Economic Times, 1988).

Behind the heavy advertising campaigns stand over-worked packers lifting heavy ampoule rings or heavy crates of bottles. There has been a fantastic increase in production over the last decade from 22,000 ampoules per shift, to 60,000 ampoules in 7 years, or 8,000 to 50,000 per shift in 11 years, with very little increase in the number of women doing the work. This has been brought about in two ways. These two related methods produce two types of health hazards. (Gothoskar, 1986).

The simplest, age-old, but out-dated method is to keep the process intact and increase the speed of the machine and, hence of the entire process. Such speed-ups on manually operated packing lines lead to fatigue, weakness, back-aches, aching arms, feet and shoulders.

Work on the packing lines involves the filling of bottles, sealing, labelling, optical checking, packing in boxes, inserting leaflets and case-packing. All these jobs may be manually done or some jobs are semi-automatic or automatic. The manual filling of bottles is extremely strenuous involving holding the bottles with hands, regulating the volume of the liquid by turning a tap or switch on and off, by pressing a foot pedal to start and stop the flow while holding the bottle under the nozzle. The strain is felt most on the arm and feet muscles.

All these operations, when manually done cause extreme fatigue. "We have to lift the heavy rings of the capsule machine several times in the shift. It is very exhausting and dangerous, as we have to stand on a stool to fit the heavy rings". By itself the single operation may not be very heavy, but repeated over hundreds of times in the 8 hours of work, everyday, it becomes strenuous and causes tiredness. (Gothoskar and Banaji, 1984, pg.20).

Another major health hazard is the deteriorating eyesight of the women working on optical checking. Every vial, and bottle has to be checked for the presence of foreign particles. Manual optical checking involves the picking up of one or more bottles or vials (depending on their size and weight), shaking and viewing them against a strong light, sometimes against black and white backgrounds in succession. These have to be checked by the naked eye. "Before we came to work here, most of us didn't have to wear spectacles. Now almost all of us have glasses. Sometimes we have to get our glasses renewed every 6 months". (Gothoskar and Banaji, 1984, pg.18). Complaints of eye strain in optical checking were most widespread in places where the women had to do the same work for the whole day.

When production is increased in high proportions not only is there an increase in workloads and fatigue for the women workers, but it also results in making the women workers less resistant to the effects of the drug they are producing. At the same time, the possibility of the hazards is multiplied due to the sheer increase in the amount of chemicals with which the workers come into contact.



In a pharmaceutical plant, where the women were involved in the production of a life-saving drug, used as a coronary vasodilator for the treatment of angina pectoris, they faced many health problems. The management had publicly proclaimed the drug as free from any side-effects or after-effects. The women however, suffered from severe health problems--swelling of their bodies, headaches, loss of appetite, nausea, constant throbbing of their head, very heavy and irregular menstruation and effects on the foetus, if the women worked during pregnancy.

The place where the women worked was a small stuffy room, which is filled with the powder of the drug.

The scientific information available in books of pharmacology confirms the experience of the women. But most workers in most workplaces have little access to such information, which is totally in the hands of the management. (Gothoskar, Banaji and Kanhere, 1984).

### Electronics

The electronics industry is one of the fastest growing industries in India and other countries in Asia. The phenomenon of Free Trade Zones or Export Processing Zones is becoming more widely rampant and electronics is one of the main industries housed in these zones.

A high preponderance of female labour, low wage structure, often violating minimum wages rules, absence of workers organisations and a complete lack of welfare activities are some of the characteristics of the Free Trade

Zones. (Sharma and Sen Gupta, 1984). Ninety per cent of the workforce of the Santacruz Electronics Export Processing Zone (SEEPZ) consists of women workers. The Management cited efficiency, patience, dexterity of fingers, agility and capacity to do repetitive work as the reasons for recruiting women. However the government officer also talked about lower wages and "ability" to work longer hours as important factors in favour of "girls" ! (Society for Participatory Research in Asia, undated, pg.27).

The entire wage policy in SEEPZ is marked by a number of irregularities and discrepancies (Sharma and Sen Gupta, 1984). "By keeping regular wages low and providing higher payments per hour of overtime, employers squeeze out the work to the fullest extent. Those who are more needy, do it out of economic compulsions, and those who hate it, for fear of termination of job". Many units do not pay the minimum standard wages prescribed by the Commission of Labour, Maharashtra.

Besides, the employers resort to various other tactics to get the women workers to exert themselves - lengthening the apprenticeship period, pressuring them to work overtime, giving no regular increments, and keeping the unions out, under legal pretexts.

In SEEPZ, creche and canteen facilities are available. However, they are no help to the women workers. Most of the women are young and unmarried and have no children and hence cannot avail themselves of the creche facility.



The canteen is inaccessible to most workers because of the great distance from their own units.

Electronics and the manufacture of electronic components, is an industry which has a high potential for work-related illnesses. The "clean and light" appearance is deceiving. Although workers often wear white lab coats, and there is little visible dirt or dust, the chemicals used in manufacturing are often quite dangerous. There are several different types of procedures, each with its own potential health hazards.

Most of work in the electronics industry has been broken down into a series of repetitious tasks that nonetheless require a great deal of concentration and precision. This monotonous, yet detailed work is extremely stressful. Many women have to work with microscopes for many hours a day. Pressure from supervisors or even more directly from the management to work too fast, mandatory overtime, and rotating shifts all add to the strain.

The stress of working conditions is only the first occupational hazard, however. The health problems experienced by the women workers at SEEPZ were, weakening eye sight, back ache, headache eye strain, loss of weight, fatigue, weakening of hearing capacity, extreme tiredness, especially during menstruation and pregnancy. (Sharma and Sen Gupta, 1984). Several of the chemicals used in the electronics industry are potentially extremely hazardous. Almost every job in the industry utilizes organic solvents such as trichloroethylene, toluene, methyl-ethyl ketones and

freons, for cleaning, stripping and degreasing. These solvents are known to cause a range of serious problems., from dermatitis, nausea and dizziness, to organ damage (liver and kidney) and even cancer.

Corrosive acids are also commonly used in the industry and cause serious burns on the skin and eyes as well as lung damages when inhaled. Acid burns from inhalation and splashing are the most frequent occupational health problems of women workers in the electronics industry.

Electronics workers are exposed to hundreds of potentially toxic substances that are new and inadequately tested for safety. Even when two or more substances appear to be safe, their combined effects may pose additional risks. Many "mystery illnesses" are reported where workers suffer from unexplained symptoms such as rashes, nose bleeds, dizziness and fainting. (Santacruz Women's Health Centre, 1980, pg.1).

Besides, specific departments have specific health hazards for their workers. In the tin plating section, the temperature is extremely high, workers also often breathe in dangerous fumes with obnoxious odour from chemicals. In the moulding section, workers often experience dizziness and vomiting. In the bonding section, workers use microscopes continuously and thus develop eye problems within a few years. In the ceramics section, the temperature is always very low. Colds and even bronchitis is a common condition of the women in this section. (Santacruz Women's Health Centre, 1980).



Another area of concern is reproductive hazards. The exposure to stress and chemicals often results in changes in sexual behaviour, damage to the reproductive system, and sterility or decreased fertility. Some chemicals are known to cross the placenta and result in birth defects to the children. As the egg and sperm cells seem to be equally vulnerable, these reproductive hazards affect both women and men. (Santacruz Women's Health Centre, 1980).

### The Photocopy Industry

The photocopy-industry, popularly known as Xeroxing, has made a great deal of work extremely efficient, especially in offices. However, most of the new 'wonders of technology' do not stop to think of the workers behind these machines. Most of the workers at photocopy centres work continuously for 10 to 12 hours exposing themselves to many hazardous chemicals, which have severe long term problems.

The main health hazards from photocopiers are dermatitis, bronchial complaints, dry eyes, nose and throat. The hazardous chemicals and gases may be ozone, toners and carbon monoxide from dry copiers and ammonia from wet copiers.

There were no studies available on this industry, in India. Thus we have referred to studies abroad. Some of the findings of these studies are given here:

Selenium : Some plain paper copiers use selenium drum (e.g. Xerox Kalle) to impart the necessary electrostatic

charges. Its oxide can cause throat irritation and sensitization. The 'official' maximum level to which the 'average' worker can be exposed (the TLV), is 0.2 milligrams per cubic metre of air.

Ozone : Ozone is a gas produced by high voltage electrical equipment. Photocopiers normally emit small quantities of ozone. Ozone is a sweet smelling, highly toxic gas. Its TLV is one part to ten million parts of air. However, the US Dept. of Health warns: This concentration (0.1 ppm) is objectionable to all normal persons, and irritates the nose and throat of most persons.

In 1980, American scientists tested 10 photocopiers for ozone emissions. The worst machine gave off 50 times as much ozone per copy as the best, and a maximum rate of use, produced 50 per cent above TLV. The researchers emphasise that: "...copiers are often installed in small, poorly-ventilated areas which are not useful for other purposes.... With inadequate ventilation, even relatively low ozone discharges can produce an exposure hazard". (Women and Work Hazards' Group, undated pg.1).

Carbon Monoxide : Carbon monoxide is a well-known poisonous gas which will be produced wherever carbon (e.g. toner) is heated in an inadequate air supply. So it is present when a plain paper copier is used. The TLV for carbon monoxide is 50 ppm. Some copiers reach half this in very well-ventilated rooms. (Women and Work Hazards' Group, undated, pg.1). The symptoms are splitting headaches, drowsiness or fainting or an increased pulse rate.



Nitrogen Oxide : Nitrogen oxide may be produced where there is a spark created in the process in the electrostatic photocopiers, although the levels are likely to be very low. The symptoms from exposure are similar to carbon monoxide. (Women and Work Hazards' Group, undated, pg.1).

Toners : Toners of one sort or another are used by most photocopiers. Dry powders are used in the dry-toner and plain paper copiers to develop an image on the paper. In the liquid processes, the toner is mixed with a solvent and so is less likely to become an airborne contaminant. Toners usually consist of a mixture of plastic resin and carbon black. The resin can consist of a number of polymers (plastics). Unfortunately, the TLV's for these new chemicals either don't exist or are completely inadequate. Scientists in the USA are concerned about chemicals in carbon black toners e.g. nitropyrene, which was found to cause cancer in animal tests. These chemicals can easily become separated from the carbon black in the process. On the basis of these studies, scientists at the University of Texas are "worried about people who have worked all the time in confined copying areas". The other constituent of toners - carbon black - has a Threshold Limit Value (TLV) of  $3.5 \text{ mg/m}^3$  and can accumulate in the lungs. (Women and Work Hazards' Group, undated, pg.1).

Dispersants : In liquid toner machines, the dry powders are dispersed in 'hydrocarbon mixtures' or dispersants. For example, in Toshiba machines, the liquid is a mixture of isodecanes, which can cause headaches, nausea, depression, respiratory irritation, and should be kept well below the

TLV of 400 parts per million. Other solvent mixtures include paraffins, ethyl alcohol, diethyl ether, acetone and octane, all of which will be mildly irritating to mucous membranes. (Women and Work Hazards Group, undated, pg.1).

Table 5.7  
HAZARDS OF DIFFERENT PROCESSES

Process	Method	Health Hazards
Thermal	Uses a heat-sensitive sheet as a copying medium; One-off copies.	coated paper ozone
Diazo	Translucent original needed. Wet process. Ammonia in the machine. Can produce very large copies.	ammonia, diazo compounds, coated paper ozone.
Magnetic Dry Toner	Magnetic powder ink adheres to image on sensitized paper.	toners, dust, ozone solvents vapours from dispersants, coated paper.
Electrostatic DIRECT Transfer	Uses light-induced electrostatic charge on sensitized paper, Toner in liquid suspension in the machine.	vapours from dispersants, toners solvents ozone coated paper.
Electrostatic INDIRECT Transfer (Plain paper)	Light-induced electrostatic charge, image on internal element is transferred to plain paper and heat-fixed. Plain paper copies, selenium, zinc or cadmium drum.	cleaning agents, toners, dust, selenium, ozone, carbon monoxide, nitro- gen oxide
Wet process/ plain paper	Wet process. Heat fused Vapourisation. Cadmium sulphide or selenium drum. May steam in the morning.	toner, ozone, selenium, cad- mium sulphide, drum next to heater may split.

(Women and Work Hazards' Group, undated, pg.1).



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## CHAPTER VI

### OCCUPATIONAL HEALTH

The research on the health problems of women, as related to their work, is extremely inadequate, especially considering the large sections of women who are affected. A survey of this research, however, indicates the multitude of problems and the complexity faced by women workers. A brief analysis is put forward here, of some of the health problems women workers face in the informal sector, directly related to their work. Some points, however, need to be kept in mind while discussing the occupational health problems of women workers.

1. These are only some of the known health problems. Research needs to be undertaken to find out more about the other occupations in which women are involved. More research is also needed in the presently researched occupations.
2. Almost every woman in the informal sector does a multiple of roles and activities. They are involved in activities like housework, child-bearing, child-care, fuel-gathering, fodder-gathering, carrying of water and many others, besides their paid occupation. Thus, the hazards that women have to face, and their many roles and activities, affect women in their multiplicity.
3. Most women in the informal sector also face a number of health problems by virtue of being poor,

labouring women - malnutrition, anaemia, discriminatory treatment, multiple pregnancies, severe deficiencies, the burden of contraception, sexual assault and harassment and mental trauma.

The following problems have been identified which result from their occupations:-

1. Problems related to the posture at work

The paper-bag makers in Delhi "live with constant stress and exhaustion, thus falling prey to a host of chronic ills. Their bodies ache from constantly sitting in one position, their backs grow bent from constantly having to stoop. They suffer particularly from pain in the back, shoulders and waist, and stiffness in the joints. Their eyes ache and water from hours of strain". (Mehrotra, 1983, page 40).

This is as much true about beedi workers, zardozi and zari workers, chikan, lace, weavers, gunny bag stitchers, carpet-makers, tagai workers and entire workforce of women who are involved in strenuous work, usually working at home.

2. Problems due to being in contact with hazardous material.

Constant contact with dyes, wood, cashew oil, gases like carbon monoxide and formaldehyde, chemical fumes in the electronics industry, tobacco dust, , and silica is a serious occupational hazard.

In a study commissioned by the Health Task Force in a village in Madhya Pradesh, about 63 per cent of the women engaged in the operation of sowing, experienced symptoms attributable to the fertiliser powder mixed with the seeds.



They complained of burning sensation in the hands, irritation of the upper respiratory tract, and sweating of the palms. No protective equipment or methods were used apart from a thin cloth around the lower part of their face. (Saxena, 1987, pages 6 and 7).

The Binotashale stone dust, which is thrown in the air, while producing slate-pencils in the Mandsaur district in Madhya Pradesh, is, in fact, lethal. Inhaling of this dust causes a disease--silicosis, which is exacerbated by increase in the severity and duration of exposure. The mean age of the workers who were killed was 34.65 years. (National Institute of Occupational Health, 1983, page 48). There have been 3,000 deaths of slate-pencil workers in the last decade. (Society for Participatory Research in Asia, 1984, page 2).

Different chemicals, fumes, and dust, have affected women workers in occupations as diverse as houseworkers, domestic workers, and washer-women on the one hand, and photo-copying and electronics on the other, with mining, agriculture, construction, somewhere in between. However, the effects on women's health have been as disastrous - with severe morbidity, a slow process of death, to sudden fatalities, due to accidents.

### 3. Problems related to their work environment - lack of light, latrines, water, ventilation, space.

Small, poorly-lit and ill-ventilated homes, in crowded mohallas and streets, serve as both the living space and workplace for almost all home-based workers.

Inadequate lighting, long working hours with extremely fine, minute work like chikan embroidery, lace-making, zari and zardozi, embroidery, and tagai work, cause severe problems like poor vision, eye-strain and headaches.

In the small-scale factories too, women work in cramped conditions, in rooms which have extremely high temperatures - glass industry, garments etc. In the garment factories, women are often employed to iron the finished garments. Many women are known to have fainted due to the heat and humidity in the atmosphere. Most of these factories do not even provide women with toilet facilities. This has known to cause two types of problems - constipation and others problems, on the one hand, and, secondly, women try and eat and drink very little during the day. Both these, cause severe health problems for women. (Rao, 1987, page 1 and 2).

Women in the mining industry, in agriculture, women vendors have the opposite problems - having to work in the open, all through the day, in the hot sun or rains. This, apart from other effects, causes them to sweat, losing very precious water and salts.

#### 4. Problems related to their work actions - tying, stitching, banging, etc.

More than 3,000 women in Jaipur are involved in the tying, process of the tie and dye work. They spend almost the entire day tying extremely minute designs on yards of cloth. They have deep cuts and dents on their fingers from the metal contraption they have to use, and from the thread.



The block-printers in Ahmedabad manually print sarees and bed-sheets. The blocks are dipped in the semi-liquid colour and placed carefully on the cloth and then the women have to strike the top of the block, twice or thrice rapidly and hard, usually with both their hands in turn, sometimes with one. In one minute, they print about 12 times, i.e.,  $12 \times 3 = 36$  strokes with their hands and shoulders. Their fingers become rough due to the constant contact with the dye. The sides of the palm, which they strike on the block are hard and have toughened. Their arms and shoulders too ache very badly.

5. Problems related to lifting weights

Lifting heavy weights is one of the "job descriptions" of women involved in construction, on employment guarantee schemes, brick-workers.... These give rise to health problems like menstrual disorders, prolapse of the uterus, miscarriages, back problems, especially those relating to the spinal column causing serious long-term repercussions. Accidents and injuries to themselves and to the children are also other serious health problems the women have to face. (International Labour Organisation, 1983, page 1290).

6. Problems related to their long hours of work

Most of the serious health problems get aggravated due to the long hours of work, the women have to put in. The postural problems that women in beedi-making, agarbatti, papad, paper-bag making, lace-making and housework, face, get much worse as the women work for 8 to 14 hours a day,

day after day. The chemicals, fumes, gases and dust that women in mines, women in slate-pencil making, in electronics, in fish-processing, and in cashew, face, worsen the health problems and culminate in serious morbidity or even death due to the long period of exposure each day. Continuous actions like bending, crouching, banging, lifting, also aggravate the health problems.

This takes place 1) due to longer and continuous exposure; 2) and due to the non-availability of rest in order to recover from the health impairment due to continuous work.

7. Problems due to the repetitiousness of the movements.

When women lift heavy weights, there are certain problems they face--prolapse of the uterus, miscarriages and back problems. But when they do the same work over and over again, the health problems are compounded many times more.

On the other hand, when women in the electronics industry spend day after day, fitting in the circuits and use only one or two parts of their bodies, - hands and shoulders, in repetitive movements, they often suffer from a condition termed tenosynovitis. Also repetitive movements dull the mind to a drugged state which, on the one hand, causes extreme fatigue of the mind, and on the other hand, is known to cause accidents which may be dangerous to life or limb.



## 8. Problems related to technology

Technology has been a double-edged sword, especially because in this society, the controllers of technology and the ultimate users of it are totally different sets of people, with different interests and concerns. Most technological developments which are introduced, are with the aim of maximising profits. These may not have positive effects, and often do negatively affect the people involved in production, especially women workers. Thus, machines are being introduced in the beedi industry, in the bead-piercing activity, in weaving, in coal-mines and various other industries and occupations.

This results in the displacement and retrenchment of women workers, without offering them any alternatives - either alternative employment for the existing workforce or, alternative training facilities for the future workforce. Thus while the already meagre sources of livelihood and survival are diminishing, many women are forced to do more strenuous work, or be more malnourished.

On the other hand, work which is strenuous and hazardous, due to the primitiveness of the methods and tools, is left untouched by technology e.g. harvesting and weeding, or the means of improving the work method remain beyond the means of most women e.g. LPG cylinders instead of the primus stove or the woodfuel.

The use of technology, through mechanisation of certain production processes, has not only increased, but qualitatively and quantitatively worsened, the health

hazards for certain sections of the workforce. The use of machines in the production of slate pencils as well as in mining, has rendered finer the silica and other dust flying in the air, and, hence, respirable. However there is no accompanying investment in measures to protect workers from the ill-effects of this "technological advance" Hence this dust is not obstructed in the nasal passage, but passes smoothly upto the lungs. The older workers in the Mandsaur slate-pencil factories have noticed that both morbidity and death have increased, since the advent of the machines in the slate factories (Society for Participatory Research in Asia, 1984). Hence, a technological advance has severe repercussions on health.

#### 9. Problems related to mental health

The very unorganised nature of the "informal sector", exposes the women working in it, to various forms of oppression, including sexual oppression; they vary from rape, forced prostitution and sexual harassment to wife-beating, the sexual division of labour at home and at work, and restrictions on the freedom to move about.

The constant tension and anxiety of this situation, results in continuous stress on the women. While men workers experience exploitation at the workplace, women workers experience both exploitation and oppression, not only at the workplace, but also in society and at home.

Sexual exploitation is regularly experienced by almost all sections of women in the informal sector - nurses and the female medical staff experience from doctors



and village politicians; women domestic workers, from the masters of the houses they work in; women sweepers and rag-pickers from their male colleagues; prostitutes, from the police, the clients and the local goondas; the vendors from male buyers and sellers, the gate-keepers of the buildings they go to sell their wares and from the police; for the workers in the processing industry and small-scale factories from their supervisors, employers and male colleagues; for women working in agriculture from the landlords, employers, and the forest guards.

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## CHAPTER VII

### PHYSICAL HEALTH ASPECTS OF WOMEN IN GENERAL

#### Introduction

Physiologically, the books inform us, women are a bit shorter, a bit lighter and a bit paler than their male counter-parts. In addition, we have been made to believe through the ages, that the nature of the work performed by women is such that it does not utilize much energy; hence, women need to eat less and consume less calories. The facts also reveal that in India, women use medical facilities to a lesser degree, die in greater numbers and at an earlier age.

Their ailments, however, were regarded as having "little to do with work" till, recently. Gradually, the heavy load of female mortality and morbidity is being questioned. It's preventibility, its relation to social norms and taboos, and the possible role of the status of women and the relationship of work to their health, is being looked at, with a new hope for women's rights.

Nutrition, reproduction, caste and religious attitudes, other social hazards, work related dangers, environment, education etc. are some of the important determining factors of a woman's health status. The low sex ratio in India and the poor utilisation of health facilities where they exist, are causing increasing concern day-by-day.

Here, we will attempt to present the general picture of health - or ill-health, without relating it to specific occupations. Further, these issues remain pertinent for organized as well as unorganized female workers.

Being in the informal sector would mean increased vulnerability - inability to demand medical or other benefits and exploitation with the threat of unemployment. All women are involved in social labour and in reproduction, but their lack of organisation makes the situation worse; it helps to perpetuate a vicious cycle in which ignorance, poverty and social conditioning lead to fear which further leads to exploitation. Hence, while this chapter deals with women's health problems in general, these problems must mean a double burden to a labouring woman and this may be kept in mind while reading this chapter.

### Definitions

For the purpose of discussion 'health' will, in this chapter refer to physical health only, though the present day concept of health includes 3 different aspects - physical, mental and social well being of a person.

Again, 'women would mean all females who are involved in doing some work - paid or unpaid. Age has not been taken as a criteria of womanhood, since it is a common sight to see school going girls running the household and, on the other hand, 75 year old women are known to put in 10 hours of work a day. (Blair, 1981).

### The Demographic Pattern in India

India's declining sex ratio (Table 7.1) has been the cause of much concern. As can be seen, this has worsened in recent times and in certain states.



Table 7.1(a)  
STATES IN WHICH THE SEX RATIO (F/M) HAS BEEN  
WELL ABOVE THE ALL-INDIA AVERAGE

Year	Bihar	Orissa	Andhra Pradesh	Tamil Nadu	Kerala	Karna- taka	Madhya Pradesh
1921	1,016	1,086	993	1,029	1,011	969	974
1931	994	1,067	987	1,027	1,022	905	973
1941	996	1,053	980	1,012	1,027	960	970
1951	990	1,022	986	1,007	1,028	966	967
1961	994	1,001	981	992	1,022	959	953
1971	954	988	977	978	1,016	957	941
1981	946	981	975	977	1,032	963	941

Table 7.1(b)  
STATES IN WHICH THE SEX RATIO HAS BEEN WELL  
BELOW THE ALL-INDIA AVERAGE

Year	Assam	West Bengal	Rajasthan	Uttar Pradesh	Punjab & Haryana	Jammu & Kashmir
1921	908	905	896	909	821	870
1931	886	890	907	904	830	865
1941	886	852	906	907	850	869
1951	877	865	921	910	858	873
1961	876	878	908	909	864	878
1971	923	891	911	879	864	878
1981	901	911	919	885	870	892

Table 7.1(c)

STATES WHICH HAVE BEEN CLOSE TO THE ALL-INDIA AVERAGE

Year	Gujarat	Maharashtra	All-India Average
1921	994	950	955
1931	945	947	950
1941	941	949	945
1951	952	941	946
1961	940	936	941
1971	934	930	931
1981	942	937	934

Source: (Mitra, 1979, pg.6 and 7; Census of India, 1981, Series- 1, Part-II-Special, pg.24).

Although incomplete enumeration, migration patterns and under-reporting of girls have contributed to the low female: male ratio, these do not explain why the situation is becoming worse over the years. Social customs like purdah are gradually decreasing and should no longer be the cause of an under-count. Again, Assam and West Bengal, with their in-migrating male population and U.P., with its outmigration have both been constantly below the national average.

Female mortality has a major contribution to make to the worsening state of affairs. Obviously, the benefits of the various health schemes are not reaching the women, who need it the most. In the past few decades, the all India and State census reports specifically mention as causes for this state of ill-health:- female infanticide, neglect of girls, early marriages and child-bearing, helped



by unskilled midwives, hard work for women, specially in low income groups, and the general adverse environmental conditions.

### Infant Mortality: Sex differences

By itself, a high infant mortality would mean a greater strain on the women for reproduction. Over and above that, the natural vulnerability of the male infant to infections would, according to custom, expect the mother to produce more sons to carry on the lineage. Hence, conditioning makes the family care for the male child more than for the female, with the resultant high female infant mortality. (Table 7.2).

Table 7.2

STATEWISE INFANT MORTALITY RATE (IMR) MALE-FEMALE DIFFERENTIAL IN IMR AND STATE DOMESTIC PRODUCT (SDP)

State	<u>Average IMR</u>		IMR (M-F disparity) 1968-71 SRS	SDP Per Capita 1975-1976 prices
	1968-71 SRS	1975-77 SRS		
Kerala	57	52	110	1,000
Maharashtra	96	94	- 2	1,455
Punjab	98	104	- 14	1,688
Orissa	131	141	+ 10	834

Source: (Miller, 1985, pg.18)

Though economic conditions have often presumed to change the prevailing state of health for females, apparently

experience shows otherwise. A study conducted in West Bengal villages (Sahajapur and Kuchi) brought out the fact that land reforms and other such development activities, though they improve the overall nutritional status of the children, do not succeed in bridging the female - male gap. 41 per cent more females were malnourished compared to males in Kuchi, while only 4 per cent more females as males were malnourished in Sahajapur, where no land reforms are taking place. Thus, boys benefit more than girls from developmental efforts. (Ravindran, 1986).

Similarly, in another study in North India, high-caste Jat girls were more likely to use supplementary-food than the low-caste Ramadasia girls who started later and received less nutrients. (Ravindran, 1986). Amongst the most deprived sector were, therefore, Harijan girls, as shown by a study of 11 villages in Ludhiana.

### Female Infanticide

This was, and still is prevalent in many villages of India. Tamil Nadu, Punjab, and U.P. are states where this practice is seen frequently. However, city hospitals also report cases where the girl baby is snuffed out, abandoned or strangled. Female foeticide is slowly replacing infanticide with the use of amniocentesis and sonography being available for the diagnosis of the sex of the child before birth. At the other end of the age spectrum, 'sati' practices still command a great following among some communities and widows are made into dieties if they give up their lives with their dead husbands. It may be questioned why men too, would not like to become



gods in this way ? This question may be asked of the religious pundits who weave these gory customs into a faith. One has also heard of the sacrifice of female babies ~~at~~ the alter of fertility, as a cure for barrenness, which is considered a major curse for women.

### Neglect of Girls

Besides the well known phenomenon of underfeeding the girls, even medical care and expenditure for health is less than for her male counterpart. According to a study in South India, the expenditure on a group of 19 first born girls, was 35 per cent of the amount spent on 18 first born boys; there was virtually no medical treatment for late born females.

Hence, during life threatening illnesses, parents would be more likely to spend as much as they could, even to the extent of going into debt for a son, while the dispensable daughter would have to do with whatever little could be spared after all other household expenditures were met.

### Early Marriage and Child Bearing

Though child-marriages, as were prevalent in the beginning of the century, may be decreasing, the age at marriage for the Indian girl still stands at 17. It has been shown that children born to mothers under 18, are twice as likely to die in infancy as children born to women in their twenties. (Table 7.3 )

Table 7.3  
AGE AT MARRIAGE AND INFANT MORTALITY

Age	Rural	Urban
Below 18 years	141	78
18 - 20 years	112	66
Above 21 years	85	46

Source: (Ghosh, 1987, pg.4)

An average Indian woman becomes pregnant 8 times, gives birth to 6 or 7 children of whom 4 to 5 survive. The risk to the health of both, the mother and infant, increases steeply after the third child.(Ghosh,1987).

Unskilled Midwifery takes its toll in the form of a high maternal mortality which is 500/100,000 live births. In India, 87.5 per cent of home deliveries in rural areas and 64.0 per cent in the urban areas are conducted by the barber women, trained or untrained. It is a well-known phenomenon that complications like ruptured uterus, haemorrhages and eclampsia, as well as sepsis, are brought to hospital late at the stage of complication. The reason for this is, poor transport and communications, illiteracy, low awareness of women and the tradition of waiting for the husband to return from work, before the woman decides to approach any centre. These problems are very deeply rooted and need to be weeded out if maternal mortality is to be reduced. One of the suggestions by the ICMR is to use a High Risk Pregnancies Strategy and refer risk and complicated cases to hospital as early as possible.



Hard Work for women, specially in the low income groups, has been an invisible area. It can be seen that the 15½ to 16 hours spent by an average poor woman every day (Chakraborty, 1987) are occupied by tedious and tiring chores.

Child bearing and rearing the 'jobs' which are done concomittantly and, hence, cannot be measured, either in hours/day or as energy utilized. However it is the most important duty of Indian women to give birth and develop the human resource!

Environment and women are closely linked. The woman makes a house into a home and develops the survival systems. Yet, she rarely has any decision making powers when it comes to choosing the site or the shape of her house. This was shown amongst pavement dwellers in Bombay.

Women are responsible for queuing up for water in the urban slums as they are for walking long distances in the desert areas. They are exposed to the toxic fumes in their kitchens in village huts as they are to burns from kerosene stove in the shelters of the slums.

They must move in the darkness to the village 'nullah' for defecation or they must sit on the railway tracks to relieve themselves. Sexual harassment is rampant at such times. Women tend to control their natural urges and this predisposes them to constipation and urinary tract infections. Snake and scorpion bites are an added hazard when the women use the cover of darkness. The sad

state of lack of toilet facilities even in offices and factories, shows that, women's comfort is of no importance to any employer.

The vagaries of weather, worsen their plight as they sweat, (losing precious water and salts) in the fields, in the uncovered shelter of the market place or at the construction sites. The long distances covered for fuel and water also expose them to rain and sun for longer periods than men, who are quicker to use transport whether it is the cycle or the bullock-cart. In conclusion, one can see that the demographic pattern is also decided by the social attitudes and behaviour of a community. The normal experience of most countries is that the higher masculinity at birth, which is lower than that at conception, further reduces, due to a higher rate of male mortality at age 0, male infants being more vulnerable. Hence, as male and female babies proceed through life their ratio should quickly get adjusted to par (Mitra, 1979). Though a similar natural phenomena also occurs in India, discrimination of the female child tends to create havoc with respect to the sex balance.

### Nutrition

As has been pointed out before, one of the oldest ways of female neglect has been nutritional restrictions. Both the quantity and the quality of food available to women are low. Tradition expects an Indian housewife to serve the husband first, the children next, and to eat whatever is left over, or was left over, from some previous meal.



Thus, though production of food grains and other food items may be normal, the distribution to the poor and to the women falls greatly short of their needs.

This contributes to chronic malnutrition, seen as anaemia which is the underlying cause of maternal deaths in India (Table 7.4 )

Table 7.4  
MATERNAL MORTALITY

Specific Causes	Per cent of all Maternal Mortality (1984)
-----	-----
Anaemia	23.3
Bleeding of Pregnancy and Puerperium	18.8
Abortion	10.8
Toxaemia	10.8
Puerperial Sepsis	10.8
Malposition of Child	6.2
Not classifiable	19.3
-----	-----
Total	100.0
-----	-----

Source: (India, Ministry of Home Affairs, 1985)

Thus, abortions are caused by (and cause), anaemia; bleeding is more uncontrolled in anaemic patients as well as speeding up death in a complicated case. Infections are more likely to set in where resistance is diminished- and they are likely to be more dangerous too.

The experiences of many small projects undertaken in India clearly demonstrate the over-riding significance of nutrition, education and environmental control (Antia, 1986), specially where women are concerned. Proteins, calories and vitamin rich foods seem to be specially taboo for Indian women. Many women eat less, deliberately, during pregnancy (or are given less by the older women) so that the baby may remain small and the delivery may be easier. Also, female children are given less protein containing foods, as this would prevent her from developing faster and reach puberty at the right time. Thus, milk, eggs, meat or fruits are denied to daughters.

The decreased intake of food, as a whole, and specifically iron containing foods, leads to nutritional anaemias. India has, probably, the highest prevalence of nutritional anaemias (World Health Organisation, 1982). In South India, it is worse than in the North (60 to 80 per cent of pregnant women), but overall, this is remarkably high compared to European countries. (4 - 7 per cent). Diseases such as malaria, intestinal parasites, specially hookworms and infections, are a further cause of blood loss or nutrient loss.

But more specific to women, is the anaemia caused by blood loss. Every month, 40 ml. of blood is lost in menstruation (0.6 mg. of iron daily), on an average, loss after delivery and in the puerperium (500 mg. of iron totally) and depletion of calcium folate and iron during lactation. These occur for each of the 6 to 8 pregnancies that a woman undergoes.



Severe anaemia can lead to death, but the mild and moderate degrees, decrease the resistance to fatigue and affect work capacity under conditions of stress (World Health Organisation, 1982).

If haemoglobin estimation is used, and the WHO standards are considered, 100 per cent of women attending Indian antenatal clinics may be found to be anaemic. In fact, the first pregnancy may be the primary opportunity for the detection of anaemia in a woman.

In addition, the contraceptives and sterilizations also contribute to the higher blood loss for women (IUCD) or more frequent menstruation for those who have been sterilized. Vulnerability of women in India is increased, because, in addition to the greater nutritional needs, which are rarely met, they are also greatly dependent on the support of others (husband, elders, society) who decide for them what is good and what is taboo.

Among other nutritional deficiencies, rickets due to women staying inside dark homes - even as girls - or due to early weaning from breast milk, and insufficient calcium in weaning foods, causes increased dangers (cephalo-pelvic disproportion) in childbirth.

Goitre, which though more common in the sub-Himalayan belt, is quite widespread among other states like Gujarat and Madhya Pradesh. It takes a heavier toll in women, where demand for iodine is higher during puberty and pregnancy.

Thus, the well balanced diet which is so often advised, should be supplemented specially for women. They need 2.7 mg. of iron daily compared to 0.9 mg. by men and this increases six-fold during pregnancy when they must depend on their reserves.

Besides this, caloric intake should be related to energy spent rather than body size and weight. (Table 7.5).

Table 7.5  
ACTIVITY WISE CALORIE EXPENDITURE PER DAY

	Man	Woman	Child
<b>A. <u>Domestic</u></b>			
Gathering firewood	115	122	74
Fetching water	7	232	40
Carrying food to farm, walking to farm	312	301	-
Cooking	3	287	24
Live stock grazing	247	68	155
	711	1010	293
<b>B. <u>Agricultural</u></b>			
Ploughing	59	-	-
Irrigation	59	-	-
Transplanting	25	85	-
Weeding	25	85	-
Harvesting	57	51	-
Winnowing	-	24	-
Threshing	45	-	-
Manuring	31	10	-
Nursery	15	-	-
Harrowing	12	-	-
Transporting	6	-	-
	334	255	-
<b>C. Other Activities</b>	878	715	655
<b>D. Rest &amp; Sleep (Approx.)</b>	550	500	650
<b>TOTAL</b>	2473	2505	1598

Source: (Park and Park, 1980).



Previously, the recommended energy requirements were as follows:

	Kal/ Day
Man (55 kg.)	
Light work	2,400
Moderate work	2,800
Heavy work	3,900
Woman (45 kg.)	
Light work	1,900
Moderate work	2,200
Heavy work	3,000
Pregnancy	+ 300
Lactation(approx)	+ 500

Source: (Park and Park, 1980).

Women work harder than men in what is known as the double day phenomenon. She should be the one to decide what food is to be produced, prepared or processed, when cash crops should replace subsistence crops, because she is the one to gain or lose by it. Or made to feel guilty if her child is malnourished or her husband is sick.

### Education

One of the major issues in making women the decision - makers, and to have their active participation, is their level of education. This is seen by the different rates of infant mortality amongst urban and rural women of different educational status. The Infant Mortality Rate (IMR) is 145 in rural areas, compared to 88 in urban areas when the mother is illiterate, and it goes down to almost half, 73(rural) and 47 (urban) when the mother is educated up to the primary level and above. (Ghosh, 1987).

However, literacy for the female child is fraught with dangers; distance to school, harassment by boys and teachers, responsibilities of younger siblings, difficulties in marriage, are the oft quoted reasons for female dropouts. The progress that education has made can be seen from Table 7.6 .

Table 7.6  
ADVANCEMENT OF LITERACY IN INDIA

Year	<u>Percentage of literates</u>	
	Male	Female
1901	9.81	0.60
1911	10.56	1.05
1921	12.21	1.85
1931	15.59	2.90
1941	24.90	7.30
1951	24.95	7.93
1961	34.44	12.95
1971	39.45	18.69
1981	46.74	24.88

Source: (Census Report, 1981).

Female literacy has, in fact, gone up to as little as 24 per cent between 1901 and 1981. Education of women ensures better health for themselves and for the families. Kerala's high literacy rate for women (53 per cent), has been quoted as the reason for its low birth rate compared to West Bengal where, though economic development is better, female literacy is not as high.



It has been seen, on the other hand, that when education concerning health and reproduction is done, stress is laid on reaching the women only. In health exhibitions, female reproductive cycle is more visibly displayed than the male. Though the need to know about their own bodies should be emphasized to women, it must not be forgotten that the sexual act is **still** very much the male's priority and so his part in the reproduction should not be forgotten.

Women feel safer about viewing posters of their own bodies, which means the uterus and childbearing, very much accepted by society. However, the male organ is for the purpose of sexual intercourse, which is to be kept in the dark, specially for women. (Dietrich, undated). It is important, therefore, for those who wield authority to present a balanced view without any bias.

### Reproduction and Contraception

Population policies have a recognized role to play in the general health of a woman.

Infertility, which causes a lot of mental stress to a married woman, stems from early marriages when the girl may still be having anovulatory cycles, ignorance of the fertility cycle, and infections, which may lead to blocked tubes. Of course, there are many causes but the misfortune is only the woman's and she is put forward by her family for investigation before her husband. She must undergo the procedures, surgical and non-surgical, for her supposed infertility. Very often, a woman goes from doctor to doctor and, in the process, has her uterus 'cleaned' (dilatation and

curettage) a number of times. Finally, even if her husband is the one with inadequate sperms, she has to undergo the trauma of an artificial insemination and its incumbent mental stresses.

Pregnancy: As marriage is almost universal in India and the status of a woman is suddenly raised by motherhood, pregnancy is something which an Indian woman looks forward to, unaware of the dangers that lie therein. The major killers in pregnancy are high blood pressure, specially in first pregnancies and in young mothers; anaemia common in mothers with more than five children, as well as those belonging to the poor sector of society, difficult deliveries due to stunted stature, or incomplete physical development, and infections.

In urban areas, medications and operations are becoming commoner every day. Even among the rich, multi-drug prescriptions have replaced diets, and ultrasound examination is confirming what the doctor did clinically a few years ago. The lithotomy position is replacing the traditional squatting one. (Savara, 1981).

Maternal mortality is still very high from 500 to 8000/100,000 live births. Thirteen per cent of these deaths occur in the 15 to 24 age group while 9.4 per cent in the 25-44 age group. If the deaths took place in a concentrated way, they would be more visible. However they occur a few at a time among poor women and in small villages. The difference can be seen in Table 7.7.



Table 7.7  
MATERNAL MORTALITY RATES

Urban Anantpur	545/100,000 live births
Rural Anantpur	874/100,000 live births

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Source: (World Health Organisation, 1986)

This also reflects the role that health services have to play in the care of pregnant women.

Childbearing, however, as stated earlier, only precipitates what chronic malnutrition and anaemia have destined for the Indian mother. In spite of this, women continue to reproduce because of the high losses due to abortions (spontaneous and induced) 9 million/ per year, (Savara, 1981), premature births (and, therefore greater infant mortality) and still births. (Savara, 1981). Thus, she goes on till some family planning worker 'motivates' her to stop. And there lies another tale.

### Contraception

The total stress is on the woman and the stress on vasectomy and condoms is no longer as great as on tubectomy, IUCD and oral contraceptive. In Kerala, in 1966, only 17.9 per cent of the 40,000 sterilizations were tubectomies compared to the 70.7 per cent of 50,000 operations in 1974. It further increased to 89.1 per cent in 1985.

Even research lays its stress on women. IUCDs have changed their shapes, and shields, coils, loops, T's

are only manufactured to suit the wombs. Sizes have been altered and so have the metallic contents (silver, copper, zinc) and all we can wait for in India is the hormone containing IUCD.

Condoms on the other hand, are not made more efficient but rather are coloured, perfumed and decorated in keeping with the belief that pregnancy prevention is the woman's job and sexual enjoyment or providing it, the man's.

Oral contraception is, without the required premedical check, distributed by auxilliary nurse midwives. Limited packets are available and, hence, failure rates are higher than they should be.

Diaphragms and spermicidals are in low availability although they are easier to use and safer. An increasing demand for them is being campaigned for.

Injectable contraceptives are the controversial issue of the day. The much criticized ICMR trials on rural and other illiterate women, of a drug, NET-EN(Schering), which has been banned in many countries, are well-known. The argument that animal studies, which showed carcinogenicity, are not valid for human females, is being questioned by many women's groups.

Sterilizations: Besides the high stress on female participants in this target oriented, incentive based, Government programme, laproscopic or band aid surgery in camps is now increasingly endangering the patients, who are often left to recover from the pain and confusion, while the team of medical and paramedicals whizz back to their institutions.



Abortions or medical termination of pregnancies are used for population control and this is increasing, with the misuse of amniocentesis for sex determination. These clinics, running from as early as 1974 (run by Dr.D.N.Pai for selective abortion) (World Health Organization, 1982) are directing their services to the villages and can be seen in small towns like Dhule and some northern villages. Often the abortion of female foetuses is done in the second trimester of pregnancy, giving rise to more blood loss and chances of infection. Often, abortions are only performed if the woman agrees for an IUCD insertion or sterilization at the same time. These are known to be more dangerous, than when performed on a non-pregnant woman. The decision to abort or not, or to combine it with IUCD insertion and sterilization, is very often made by the departmental heads of institutions while no other opinions are entertained.

In conclusion, it is often said that it is the women who want methods which will not cause discomfort to the men (condoms or natural family planning) and which they can hide from the men (laproscopic sterilization), but it is anybody's guess why women do this and what would be the consequences in terms of violence or mental trauma if they did not do so. Desertion, divorce and wife beating are all too common in cities like Bombay as well as in the villages.

### Technology: Effects on Women

The misuse of technology and research has been mentioned frequently in the various parts of this chapter. It is unfortunate that high technology is often seen to be

synonymous with greater care, specially by the medical profession itself. (Antia, 1986). Appropriate simple technology, indigeneous systems of medicine and low cost drugs, are now being introduced (with the approval of the West!) and will hopefully make health more available to the woman.

So far, whether it is as contraception or surgery to relieve her burden, it has mostly worked against her. Breast-feeding was replaced by bottle-feeding due to multinational drug companies and international funding agencies (CARE) pouring powdered milk into the country. Now, the working mother is shown a gravestone shaped as a bottle even if she dares to buy it! Where is the alternative for the woman, who has to go long distances to work, with no creches, no breast feeding breaks, no sympathizers! Is there no technology where the highly nutritious and protective breast milk can be stored and given by a substitute when the mother is at work?

Traditional birth attendants are now being given kits to promote their skills, where they were ridiculed earlier. It is a sign of progress. From the day of burning witches still done in Bihar and Karnataka, and beating 'possessed-women' to death to exorcise the devil, we are moving towards a realization of the power of a woman, but technology, unless consciously controlled by women, can do more harm than good. In fields of employment, tractors have increased weeding time for women and household processing, when mechanised in factories is taken over by men. Women are slowly being edged out of the work field by technology which is geared to men.



### Conclusion

Social attitudes, household decisions and Government policies regarding women's health, whether these is about poor nutrition, chronic anaemia, recurrent childbirth, or the problems of contraception, must get out of the 'she'll-get-used-to-it' apathy that they are in today. With ageing women, menopausal symptoms like hot flushes, insomnia, and bone pain, are ignored till a fractured bone is diagnosed as osteoporosis. Prolapsed uteri remain so for years on end. Even illnesses like diabetes and hypertension are treated reluctantly for women, while men are taken to specialist clinics for the same. Dentures, spectacles, hearing aids, are too expensive for old women. A comprehensive medical scheme for women is an absolute and urgent necessity.

Women's labour in the poverty sector makes all the difference for her family survival or non-survival. For the first time, the 7th Five Year Plan has taken note of this and Rs.45 crores have been allotted for supporting women's employment. It is increasingly recognized that organization is necessary so that women can demand their rights and be heard when decisions, specially about them, and their health, are being made.

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## CHAPTER VIII

### PSYCHOLOGICAL ASPECTS OF HEALTH

Occupational health should aim at the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations.

- Definition of Occupational Health by the Joint ILO-WHO Committee(ILO,1983)

An important aspect of a person's mental health is the feeling of security or insecurity vis-a-vis her own being. The very unorganised nature of the "informal sector" and the women working in it, exposes them to various forms of oppression, including sexual oppression. The forms of sexual oppression experienced by the women are numerous : they vary from rape, forced prostitution and sexual harassment to wife-beating, job insecurity the sexual division of labour at home and at work and restrictions on the freedom to move around as they please. On the other hand, women face the cruel side of "freedom", contraceptives, which are dangerous and yet to be fully tested, repeated abortions, all forced on them.

Rape and sexual harassment are almost universally feared, not only by those who have experienced them, but also by those who have not. It is a recurrent theme, and seems to determine many aspects of women's lives : the decision whether or not to take up a job, the kinds of jobs available, the kind of work they train for, the place of work and their participation in social activities.

Most importantly, it determines their self-perception, their feeling of ease, their feeling of security and general well-being (Rohini P.H., et al, 1983). The physiological effects of constant strain and tension, due to sexual or other harassment of women have yet to be documented. But the personal experiences of women in the informal sector is a living document of the effects as they face them everyday.

Women workers suffer a peculiar form of oppression in the workplace, in the home and in society at large — sexual harassment. A male worker, returning home late at night, does not have to face the danger and the fear and tension of the possibility of being raped on the way.

The experiences of nurses, auxiliary nurse ~~midwives~~ (ANMs), Community Health Volunteers (CHVs), and the female medical profession have been documented - the fear of sexual attacks from village politicians, doctors, wardboys and patients. The death of Shobha Gonge at Risod village of Akola district in Maharashtra (Baija, 1983), the attempted rape and maiming for life of Aruna Shanbaug in KEM hospital, Bombay, (Gothoskar, 1980) are only a few glaring examples. The pressure to meet family planning targets, which led to the suicide by Manda Padwal (Duggal and Gupte, 1983), an ANM, only add to the hazardousness of the profession. Various studies (Manohar, 1983) have documented the constant threat of sexual harassment of **women-domestic** workers, their vulnerability, at their place of work, which is the place of residence of the master of the house, his home-ground, and she is totally unprotected, in more ways than one. Also various incidents of false theft



charges (Pawar, 1982), have been reported, which have caused immense tension (Singh, 1983), and feelings of worthlessness and humiliation.

This has been also the experience of women working outside the home - women working in small factories, sheds, fields, construction sites or brick-kilns. In most of these cases, work is irregular and there are long periods extending to weeks or even months, when the women are not given any employment. Thus, when there is work, women try to work, as long hours as is possible, and continue working late, despite the "protective laws" prohibiting women workers to do so. On the other hand, in many of the cases, the number of days women are given work, depends on the whims of the supervisors of jamadars. This figure of authority wields almost complete control over the working lives of women, including the possibility of her being able to work at all. There have been situations in the free trade zone units, where the manager has extracted sexual favours from women workers in return for a continuation of employment. (Rohini, P.H., et al, 1983).

Most women also experience active or passive discrimination at the workplace. They are given the least skilled, the most monotonous and often the more hazardous jobs as well as, often, paid less than men for the same or similar work. (Mallika, 1985). Certain operations in agriculture like weeding are "reserved" for women. This operation involves constantly bending for all the eight hours that women work. They are also paid less. In the beedi industry men often work in factories and women at home. (Morje, 1983), doing the same work and getting very

different wages and benefits; in the electronics industry, women do the assembly work and men do the supervision. The Commission on its visits, observed the same discrimination. In a match factory, the women did all the manual work, including lifting a heavy wooden shelf with match sheets to feed in the machine, while the man controlled the machine through the switch. The workers in a government cashew factory in Kerala were all women, but the supervisors were men.

At home, women are kept in a subordinate position, denied any decisive say in family matters, and often beaten, or otherwise ill-treated. Women are the last priority, even in the family, the last to eat and the last to get medical treatment. (Murthy,1980). Even when they work outside, and are economically productive, the work at home is her responsibility alone - from getting water from long distances to fodder gathering to household chores. (Kishwar and Vanita,1984). Besides this responsibility for social production, the entire responsibility of reproduction and child-rearing is on women. This is also true about contraception. (Gothoskar,1986). It is all the time reinforced through words, action and inaction, that she is the least valued and least important.

Another aspect of harassment that almost all women talk about is the harassment at home due to drunkard husbands. As a pheriwali in Bombay said "When my husband died, I felt I was better off. Even if I eat dry bread, at least I eat it in peace. What did I get from marriage but scoldings and beatings?" (Alaka and Chetna,1984). Women vendors in Madras had a similar experience. A fruit



vendor in Madras says. "At night, I bear the brunt of a different harassment". (Azad, 1986). In personal interviews and conversations, women workers in the informal sector talk about how they have absolutely no control over what they earn. "After slogging for the whole month, my husband just snatches away forcibly whatever I earn". (Azad, 1986).

Other types of harassment that women workers in the informal sector have to put up with are the contradictory expectations from their different roles. They are often the major, if not the sole-supporters of the family. (Gupte and Borker, 1987). But their role as a houseworker, a mother, is expected to be fulfilled just as well. Besides the strain, the workload, and the responsibility, is the constant feeling of guilt, which gradually becomes a part of the personality of women. If a child is ill, if there's not enough food or money, or any child is hurt, it is somehow the woman's responsibility, her blame and her guilt. On the one hand, there is the idea of female seclusion in its various forms and degrees and, on the other hand, there is also the pressure from society that women should perform, as workers, as housewives, as mothers.....There is an implicit demand that women workers be superhuman beings, but....not show it - because, then, it is threatening. And that too is dealt within this society. Even as late as 1982, there have been instances in Bihar and Maharashtra (Kashtari Sanghatana, 1984) at least, where women have been branded as witches and killed - burnt or stoned publicly.

The pressures that women workers have to live, under, the stress and strain of the entire situation, have physical repercussions as well as an impact on their entire emotional, psychological ability of cope with their lives.

There are other aspects to the oppression by society and by the State which impact on the mental well-being of a large section of women, the Dalit or Harijan women. A large number of the attacks and "atrocities against Harijans" consists of rape and other forms of attacks on women.(Omvedt, 1979). A tradition which exists in the major part of the country gives 'upper caste' men of rich farmer or landlord families the "right" to make use of 'low caste' women. Poor women, working daily in the fields, or in the forests, are extremely vulnerable to the attacks from the police, the forest guards and the landed rich.

Besides, in most Indian villages, Dalits have separate wells from caste Hindus. The problem of getting water, and the availability of drinking water, is particularly important for women because it is a crucial part of the daily labour of maintaining the household.(Omvedt,1979). Caste oppression here implies that women have to walk great distances in search of drinking water, despite its availability in the village itself. This discrimination goes further in the lack of opportunities for Dalit girls to be educated and then in the type of work available to them.

The Status of Women Committee Report, 1974, points out that the majority of working women in India are in the



unorganized rural and urban sectors (fifty per cent were agricultural labourers, thirty per cent, peasant cultivators, fourteen per cent, in unorganized sector jobs, including casual labour, contract work, domestic service etc.) This is even more true of Dalit women. In 1961, the work participation rate for women in general was 27.95 per cent and for Dalit women, it was 35.3 per cent. Dalits were 33 per cent of all agricultural labourers in that year, and Adivasis 10.5 per cent. The percentage of agricultural labourers has grown since 1961 and so has unemployment. Both factors affect women more severely, and Dalit women most of all. Women are nearly 40 per cent of all agricultural labourers now, and a significant proportion of these are Dalits. Dalit women who are not agricultural labourers, usually work as casual daily labourers, as migrants on road building and other building projects, and in various petty, miserably paid jobs that are not even counted as "work" by census criteria. (Omvedt, 1979).

For women who work at home, their entire area of interaction, of vision, of knowledge, is, to a large extent, circumscribed. There seems to be little choice about their relationships, about choosing their work. A sense of isolation, loneliness has been expressed by many women. They are more dependent on only one set of relationships - those in the family. In situations where the husband, brother or some member of the family also act as middle-men, the dependence of the woman is all the more on her relationships in the family. Family or male control over women's access to knowledge, is almost complete. It is then a short way to the instances of wife battering, and also wife-murder.

While women, especially poor women, are looked at as object for the sexual gratification of men - husbands, colleagues, supervisors, the boss, the landlord, the police, their sexual identity and sexuality is not a matter of interest, even to their husbands. Hence, even sexual relationships turn out to be "a different harassment" for most women. However, the consequences of the sexual act are women's responsibility alone. Most men refuse to even share the responsibility of the use of contraceptives. Using dangerous or unreliable contraceptives is left to the woman, and, if she does not use them, the consequences again have to be borne by her - repeated and unwanted pregnancies. Often men do not want even the women to use contraceptives. This forces women to resort to contraceptives, which their husbands will not be able to detect - drugs like Depo-provera or Net-en which are injected into her body every 2 or 3 months. These drugs have very severe effects on women's bodies, but are advocated by our government and our health system, as their main concern is to slow down the population growth rate, even if their 'targets' are achieved at the expense of women's health. Rather than attempting to change the outlook of men, this very outlook is made the rationale for injecting these hazardous drugs into the bodies of women, especially poor women.

This attitude of the Government and the health system is also evident in their approach to technologies like sex-determination and sex-pre-selection. Women are forced to undergo these tests which affect not only women's health today, but threaten, in the long-term, the



very existence of women. The government is silent about this, because these tests presumably also help reduce the population in the country - by eliminating unwanted daughters before they are born. These attitudes are a combination of the short-sightedness of vision and a callous attitude towards the health and well-being of the vast majority of women in this country.

This obsession of the men and of the State with women's fertility and sexuality has different implications for different women. Young women who are able to bear children have to go through repeated pregnancies and deliveries and then through the Government-controlled and promoted family planning measures. However, women who cannot, or do not conceive, have to face a very difficult situation every day. On some of the visits of the Task Force, when questions regarding health were asked, older women often came forward to talk about the problem of "infertility" of their daughter or daughter-in-law. Many women are deserted because of their supposed infertility. Besides, they are looked down upon and made aware of their "inability" to produce children almost everyday, but especially on festival or auspicious occasions.

At the other end of the fertility spectrum, elderly women, post-menopausal women, and especially widows, are treated abominably. It is as if their one and only function in life is over by getting on to the wrong side of the age bar.

Another aspect of harassment and atrocities on women is the custom of female seclusion. Though avowedly

practiced to "protect" women, it has extremely negative implications for women's self-image, women's ability to participate in the labour market and also directly on women's health. The extent of exploitation of women in home-based work increases when they remain in purdah, as seen in the chapter on home-based occupations.

The custom cuts across religious lines and is found among both Hindus, and Muslims all over India. The manifestations of this custom differ from one religion and region to another, ranging from women who are not allowed to leave the household and are often veiled, to women who work outside, but do their utmost to avoid contact with 'outsider' men.

The custom and ideology supporting female seclusion also supports its reverse - the idea of exposing or punishing a woman if she has "crossed her limits". This punishment has often come in the form of systematic rapes of women. (Lessinger, 1985).

For women who have to work outside, the ideology of female seclusion is in direct conflict with the daily reality. Often, women's work outside is portrayed as a sacrifice she has to make, in order to fulfill her role in the family better, and, hence, any notion of self-fulfillment or self-advancement is not in keeping with the role. Hence, involvement in the work, travelling often to sell wares in order to get a better price, trying to see what area of work or trade would render better prospects - all these concerns have to be foreign to women. The result simply is that women are not allowed to advance in their field.



Yet, the pressure is there for women to perform, to be good workers, to be efficient. If they do not, it is because "they are women". How women cope up with these myriad contradictory pressures and tensions, and what toll in terms of their mental and physical health this takes, has not even, as yet, been a subject of research. This dimension is not merely an "additional element" in the health and well-being of women workers, but the basis on which one can even begin to understand the "purely physiological" ailments and problems of the vast majority of labouring women in this country.





## CHAPTER IX

### THE ROLE OF TECHNOLOGY IN WOMEN'S WORK AND HEALTH

Observations and field studies carried out by researchers, all over the country (and in other countries of the Third World), indicate that technology impacts on women in 2 basic ways:

- 1) By displacing women's labour
- 2) By increasing women's burdens and socio-economic vulnerability.

Let us examine these effects more closely:

1) In example after example, we find that the introduction of technology for processes or functions, traditionally performed by women, results in their displacement and the takeover of such processes and functions by men. This generally occurs in the following manner.

It had been well-established (and the Commission's field visits have confirmed) that in most agricultural and unorganised industrial activities, women perform the most arduous, monotonous, and drudgery-laden tasks, e.g. transplanting, weeding, threshing, rice-husking, fuel searching and carrying, beedi-rolling, tobacco-processing, scavenging . collecting, coir-yarn-spinning, coir rope-making, cashew and fish-processing. These are only a few illustrations. Most of these activities are almost entirely manual, performed with only primitive tools and implements.

However, whenever a better, labour-saving, productivity-increasing or safer technology becomes available for such tasks, the women who traditionally performed them

are almost immediately eased out and replaced by males. Several illustrations of this are near to hand; automatic grain threshers, almost exclusively operated by men, are present in all intensive agriculture/green revolution belts, whether in Punjab, Haryana, Uttar Pradesh or Rajasthan. But only a couple of decades ago, threshing of harvested grains was done only by women, and was an important source of income for women agricultural labourers and peasants.

Similarly, the introduction of a rice-husking machine by the government, with credit provided by banks, eliminated women in rice-growing areas such as West Bengal, Orissa and Andhra Pradesh, from what had been a major source of income, particularly for destitute women and widows. The new technology, and the credit needed to acquire it, was captured by local menfolk who would never have been caught dead husking rice by hand, which was considered a "woman's job". The same is true of net-making in Kerala.

Again, milling of grain by hand on stone flour mills was another task almost solely performed by women in various parts of the country. Today, with "electrification of villages" proceeding at a rapid rate, electric flour mills can be seen even in small hamlets, owned and operated by men.

Micro-studies from all over the country have also reported that the arrival of even non-job-related technological innovations like bicycles have not helped women. It is a common sight to see a man riding his bicycle while his wife follows on foot with a load of firewood on her head and an infant on her hips.



2) At another level, there is growing evidence that the availability of new technologies actually aggravates women's situation and workload, while simultaneously reducing their avenues of wage-employment or self-employment.

a) While mechanisation has displaced women from traditional tasks, their work participation rates have actually increased in green revolution belts, because increased production is resulting in more women joining the agricultural labour force, but in return for unequal wages. The latter trend has also been accelerated by the increased recovery of land from tenants created by the new technology. Furthermore, small holders, who cannot afford the high investment demanded by the new technology, send their women to work as labourers on others' farms and use their income as capital for investing in mechanization.

b) The increased earnings, generated in technology-intensive agricultural belts, have also increased women's traditional work burdens; tasks like fuel collection and cooking have become more onerous because women are expected to feed the hired labour on their farms, apart from their own family members. Similarly, since mechanisation has pushed women into the most difficult, physically exhausting activities, they complained of having to work harder and for longer hours than before.

c) Social problems of women have also been aggravated in such areas, and this is one of the indirect consequences of technology on women's situation. Studies have shown that the new affluence in Green Revolution belts has not

necessarily led to greater expenditure on basic needs like food and shelter, but on things like liquor, drugs, and gambling. The latter have increased the incidence of wife-beating, rape, molestation, and other forms of violence against women.

### Technology and Women's Health

While we have discussed some of the general effects of technology on women, there are even more specific effects of technology on the health of poor women. Broadly speaking, technology has the potential to affect women's health, both positively and negatively and both indirectly and directly. Furthermore, there is a growing evidence that women pay the price of ill-health even with technologies that are ostensibly health-promoting. Let us examine each of these issues separately.

#### Negative Effects of Technology:

##### 1) Work, Food and Health

We saw earlier that technologies aimed at 'development' had either displaced women's labour, or increased their workload, or aggravated the oppression of women and violence against them. But these very same dynamics have a further impact on women's health, particularly on their nutrition.

Various studies have established that women's share of the family's food and access to medical services is not only far less than men's, but inadequate even in absolute terms. For example, studies in the 'developed'



or 'boom' areas of the country (where technology has played a key role) show that the health and nutrition status of women has actually deteriorated, and that the incidence of low-birth-weight babies and neo-natal mortality (both highly correlated to women's nutrition status) has increased. This has been linked to the fact that the affluence generated by the new agricultural technologies has not been used for improving food intakes, but, under men's control, is diverted into non-essential expenditures. Thus, on the one hand, the family's food basket continues to depend largely on women's meagre earnings, but men continue taking the lion's share of the food. On the other hand, as we saw earlier, women's workloads have also increased, thanks to technologically induced changes in work and production relations.

All this results in an under-nourished, over worked, and unhealthy woman, unprotected by any labour laws or social security measures. Similar examples of the indirect but negative impact of technology on women's health can be found in various other sectors, such as in crafts, weaving, carpet-making, match-making and fireworks units, tobacco, textiles, rope-making, and a host of other informal sector occupations.

## 2) Technology and occupational health hazards

There are also a number of cases where the introduction of new technological processes itself harms women's health. For instance, several studies commissioned by the Task Force itself have highlighted the fact that

new areas of economic activity, made possible by the availability of new technologies, have resulted in negative health impacts on women.

The electronics and pharmaceutical industries are classic examples of this. Here, where women are almost exclusively employed in certain functions, the trend towards miniaturization, and handling of hazardous substances, directly affects the health of workers. Eye problems, postural complaints like backaches, headaches, skin irritations and allergies, are some of the many health problems faced by women workers. In industries like match-making, where women and children form the bulk of the labour force, the chemicals being handled constantly lead to untold health effects.

Such direct effects on health are largely due to the fact that technologies have been developed for productivity and profit, with workers' safety, posture, and overall health not entering the picture. And with avenues of employment being so limited for women, they are unable to organise or demand safety measures even when they are well aware of the impact of their work on their health.

### 3. Health hazards of health technologies

Ironically, several medical technologies, ostensibly evolved for improving the health of the people, and particularly of women, have created precisely the opposite effect. The best example of this, is in the area of contraceptive technology.

From the 'sixties, women have been the focus of the family planning programme in India, since the one and only



attempt at promoting male sterilisation caused a severe backlash. With the growing panic about increase in population, the onus of birth control has been placed on women, and specifically on poor women. However, the contraceptive techniques that are offered to - or rather thrust on - women have 2 invariable adjuncts:

(i) They are technologies which are outside women's control, requiring trained professionals to install them or provide follow-up. e.g. the IUD, tubal ligation, injectable contraceptives and laparoscopic tubectomies.

(ii) They are technologies which can be hazardous to women's health at two levels: (a) either because the technology itself has side effects (as is the case with injectables and intra-uterine devices like the loop and the copper T) or because (b) to be safe, the technology has to be applied by highly - trained experienced hands, and within an environment where sterile conditions and adequate after-care are scrupulously maintained. Under the present conditions, where mass laparoscopy camps, with inadequately trained doctors and unhygienic conditions are the order of the day, such technologies place women at an even greater risk.

This is indeed ironic in light of the fact that birth control is propagated as an intervention which is supposed to promote women's health, not endanger it. It is a well documented fact that repeated pregnancies and lactation in poor women, coupled with inadequate nutrition and increasing work burdens, form a vicious cycle which drains and debilitates them. This, coupled with national

concern over the so-called population explosion (though not, one notices, over women's hunger or overwork) has led to contraceptive technologies being positioned as a virtual preventive health measure for women.

But it is paradoxical that the excessive bleeding, cramps, backaches, headaches, nausea, dizziness and swellings reported by thousands of women who have undergone IUD insertions, laparoscopic sterilizations, and most of all, injectable contraceptives like Net-en and Depo-provera, are dismissed as "minor problems" or "exaggerations". Perhaps this cavalier attitude is due to the fact that the majority of these women are poor, labouring, uneducated, and from the lower strata of society, and a majority of the doctors are middle or upper class males. And while a middle or upper-middle class woman can have the ill-effects of such a "health" technology attended to by her doctor, poor women have neither the means, nor the access to do so. Thanks to the camp approach, and the lack of accountability of health services to the poor, these women have no recourse but to suffer the side-effects in silence, no matter how much their normal functioning is impaired.

In many cases, researchers have found that poor women were not even aware that they were participating in clinical trials for injectable contraceptives. They were paid attractive sums of money to regularly take injections which, they were told, were "good medicine" to make them "healthy". The symptoms they developed were treated either as "psychosomatic" or as unconnected conditions.



And while birth control and the small family norm are being vigorously promoted, on one side, another supposed "health" technology, viz., amniocentesis, is actively working in the opposite direction. Amniocentesis, originally developed to detect foetal abnormalities, and save women from the mental and physical effects of bearing and rearing deformed children, has become a tool for sex-determination and pre-selection in our society, which accords women such low status.

Amniocentesis-cum-abortion clinics are proliferating all over our country, without let or hindrance from either the government or medical bodies. Ill-equipped and poorly trained doctors and technicians are performing this test, which requires a high order of skill, on thousands of women, with disastrous results in many cases: rupturing of the amniotic sac, and deaths from anaphylathic shock or haemorrhage are some of the known consequences. Preying on the socially-enforced desperation for a male child, these clinics also perform abortions on women at dangerously advanced stages of pregnancy, with inevitable results on their health, and sometimes on their lives.

These are only some of the most serious and widespread problems created by so-called health technologies. Far from improving or preserving the fragile health status of women, they often actively endanger it. Therefore, the whole question of technology and women's health must be seriously re-examined in this context, particularly where the technology is not within women's control, or where it facilitates the existing negative attitudes to women, or promotes male-domination.

#### 4. Lack of technology and women's health

Another area for concern and action is related to the lack of technology and the consequences to women's health. In the foregoing sections, we have seen the negative impact of technology in an active sense, i.e., when the advent of technology displaces women, increases their workloads, or directly and indirectly impairs their health. However, technology impacts on women in a passive sense as well, specifically, by its absence or lack in areas where women require it.

Examples of this are numerous and can be seen wherever poor women work and live. The absence of simple technologies for domestic fuel, for cooking and heating, for pumping water closer to the user, for implements and tools which will reduce the drudgery, energy-intensiveness, and health hazards of women's work (whether wage-work or subsistence work), not to mention increasing their efficiency and productivity or generating much-needed time for leisure and rest, is a major lacuna. Repeatedly, the Commission observed the almost primitive production technology, which, with small changes, could reduce the physical labour of the women.

The problem here is of three kinds: (i) where technologies have been developed but have not reached the majority of poor women for structural, administrative, or other reasons. The smokeless chulha is an excellent illustration of this. Various fuel-efficient, energy-saving models, which virtually eliminate the toxic fumes emitted by bio-mass fuels in traditional cookstoves have been



available for over a decade. However, rather than the Government disseminating these on a war-footing with credit support for their purchase and installation, only a miniscule number of rural and urban households have obtained smokeless stoves, and these too largely through voluntary and non-governmental organisations.

ii) Where no technologies have been developed for easing or facilitating women's work because the latter is itself a low priority in research and development. For instance, simple tools, implements or protective devices can be developed and distributed to women working in coir-yarn spinning, rope-making, tie-and-die, beedi-rolling, transplanting rice, shelling prawns, etc. These could be cheap, simply designed, mass-produced by other women, and save them from untold miseries and illnesses. The fact that little or nothing is, in fact, available, in a nation capable of space satellites and nuclear power, speaks eloquently of the low value placed on women's labour and health.

iii) Where technologies have been developed, but are inappropriate, or unviable for poor women because they have not been consulted or involved in the planning, development, and prototype-testing phases. Several illustrations can be given, but the coir-yarn spindle and solar cooker best symbolise the problem. In the former case, the stretching and twisting of coir yarn by hand cause severe lacerations and abrasions on the palms of women and children engaged in this occupation. A protective wooden spindle-like device was developed to shield the palm from the sharp fibre. However, the device was designed for male hands, and was too large to be used by women and children, who predominate in this occupation! Similarly,

the much-vaunted solar cooker, which eliminated the need for bio-mass cooking fuel and required little or no tending, proved a failure in poor households for many reasons; it was expensive; it could not be used in the evening, when most poor women cook the main meal of the day; most models were not suitable for preparing chapattis or rotis, the preferred staple in a large part of the country; and it required pre-planning of meals, an impossibility for most poor women who purchase whatever is available in the local market each day from their wages, or cook the grains and pulses they receive in kind for their labour.

#### Positive Effects of Technology:

Having dealt at length with the negative impact of technology on women, and particularly on women's health, it becomes clear that for technology to have a positive effect, one has often only to reverse directions.

For instance, installation of bio-gas plants, and training of women in their operation and maintenance, has directly benefitted women. They no longer have to travel long distances to gather cooking fuel, thus saving their limited energy resources. The case with handpumps and drinking water schemes is very similar. Women welcome such innovations which save them numerous hours of labour. The Nada Chula, designed with poor women's participation, and built by them with a training in the basic thermodynamics of stoves, is another example.

Similarly, the design and development of tools, implements and protective devices for the occupational



health hazards faced by poor working women in the unorganised and self-employed ranks, would transform technology from a negative to a positive force with immeasurable health benefits.

The withdrawal or modification of many health technologies, which have proved unhealthy for women, would more than compensate for the supposed ill-effects of the absence of such technologies. For example, vigorous promotion of female barrier methods of contraception such as the diaphragm, (now the preferred technique in developed countries because they are the safest), would give women control over their contraception and eliminate the hazards of methods like IUDs and injectables. Amniocentesis for sex-determination should be banned, and not allowed at all in the hands of the private sector in medicine.

Finally, the negative gender-impact of technology can be modified or reversed to a great extent through a few simple interventions such as selective training of women only, to operate technologies which have the potential to displace their labour; provision of loans and other supports to women only, for the acquisition and operation of certain new technologies; selective development of technologies—particularly appropriate technologies for women-dominated occupations; reservation of jobs for women when the advent of technology threatens their employment, and even if it does not.

Technology can become a positive force for the empowerment of women only if its progenitors and administrators are sensitive to the situation of poor women and the various roles they play, otherwise, it has proved to be a powerful instrument for furthering and refining their oppression and exploitation.





## CHAPTER X

### METHODOLOGY

### SUMMARY AND RECOMMENDATIONS

The Task Force on Health discussed the terms of reference of the National Commission and attempted to examine and concretise these, as would be applicable to the Health Task Force.

The terms of reference of the National Commission were translated to relate to the health of women workers as follows:

- |   |  |
|---|--|
| 1. Present status   | - with respect to health.  |
| 2. Legislation  | - protecting the health of women workers.  |
| 3. Productivity   | - contribution of women in economic terms and the cost to their health caused by the occupation. |
| 4. Survey   | - impact on health of the various categories of working women.                                   |
| 5. Effects of micro-policies  | - on health status of working women.   |
| 6. The link between productivity and the reproductive roles of women. | - with special reference to their health and nutritional status.                                 |
| 7. Measures for integrating women in national development             | - integration of the health needs of women with the National Health programmes.                  |

The Task Force also added newer dimensions to the existing terms of reference e.g. the dimension of the import of technology on women and women's health. This

impact includes their displacement by men as they move into skilled jobs and women remain in manual, less paid jobs; it also includes invasive techniques like contraceptives. On the other hand, lack of technology also affects women adversely e.g. their access to water, and better cooking facilities. It also affects their work and health in terms of their posture while working.

The other issues identified were the correlation between occupation and health and the intervening variables such as earnings and benefits, and the status of women as earners in the family and in the community.

The term "unorganised women workers" was interpreted to mean every woman, not in the formal sector, who puts in labour, directly or indirectly. This labour may be paid or unpaid.

On the basis of discussion, some categorisation and grouping of different occupations was attempted. It was decided that the scope of the women workers to be covered by the Task Force would include:

1. Manual workers - agriculture, construction, mining, brick-making, head-loading.
2. Home based workers - housework, beedi-making, agarbatti-making, garments.
3. Service workers - domestic work, washing, scavenging, rag-picking, prostitution, vending, hawking.
4. Process workers - cashew, coir, fish-processing.



Within each category, the following areas could be examined:

1. Health status.
2. Occupational health.
3. Accessibility to and availability of health services.
4. Maternity, nutrition, income.
5. Women's awareness and knowledge.
6. Mental health.
7. Impact of technology.

Objective studies could be undertaken in these areas, but symptomatology was also important, especially considering the situation of women in the most unprotected strata, where hard data were not always available or identifiable.

It was decided that the objectives of the Task Force should be to concentrate on, not only 'health', but also on the general well-being of women, which would include their mental health, as well as the impact of physical and sexual violence, including sexual harassment, on the well-being of women workers in the informal sector.

To this end, the Task Force began its search for material on women, work and health. The various sources were:

1. Research reports, documents, journals, magazines and news-letters, covering studies or reports on the various aspects relating to women, work and health. Due to the limited number of systematic studies on women's work and health, the Task Force has recorded documented information from various sources, including, the lay press

and personal interviews. The length of the report, or the tables formulated as a result of this compilation, should, however, not lead one, either to be complacent about the volume of data available, nor conclude that these are the only problems women workers face. The lack of large-scale studies on this issue is indicative of the invisibility of women's health problems relating to their work.

2. The Task Force also wrote to all the 106 Preventive and Social Medicine (PSM) departments of medical colleges.

3. The Task Force wrote to 314 grass roots organisations including women's groups, trade unions, landless labourers' and other rural organisations, asking for material and their personal observations and experiences.

4. The Health Task Force called a meeting of women trade unionists and women leaders in Bombay.

5. Some members of the Health Task Force visited various areas in Bombay - industrial estates, hutments, production units, people's organisations, hospitals, and hospital projects.

6. Some members of the Health Task Force also went to areas in other states like Jaipur and Ahmedabad and met groups of women workers.

7. The Convener of the Health Task Force went to different states with the National Commission and talked to women workers there. The Co-Convenor accompanied the Commission on one visit in place of the Convenor.



8. The Health Task Force Commissioned studies in areas which cover a large section of women, but where very little information exists. A total of 8 studies were commissioned.

9. The Health Task Force organised a workshop for a day and a half in Bombay in which women activists and researchers from different parts of the country participated and shared ideas and information based on their work with women workers in the informal sector. The report of this workshop was sent to all the participants as well as those people who had shown interest in it, asking them to send in more information and suggestions, especially on the recommendations to be included in the final report of the Health Task Force.

OVERVIEW

To understand the occupational aspects of health, it is necessary to have a detailed examination of women's work in terms of the actual activity undertaken, the hours of work entailed, the remuneration, if any, and the effects of all these on their nutritional status and physical as well as mental health. To understand the issues pertaining to the nature of a woman's occupation, it is necessary to analyse it in terms of the types of physical stresses involved in the movements required, the postural positions, and their effects, and the noxious materials used. Long hours and inadequate wages further exacerbate the occupation related health problems of women and, hence, are also examined with respect to the occupation under discussion.

The working environment is examined in relation to its effects such as lack of adequate lighting, insanitary conditions, poor air flow, working in the open elements and such other factors likely to affect her physical condition. Mental stresses are also viewed with respect to the factors associated with their work. Lastly, it is essential to examine those benefits and protective legislation, which affect women's health such as minimum wages (as purchasing food and adequate, nutritional status are directly related to them), access to health services, maternity benefits and creches (which decrease her tension with respect to child care while at work).

All working class women work, whether they are wage-labourers or not. Labour in the home is not only



reproductive and social with regard to the upbringing of the family and care-taking functions, but also productive, as women's work replaces goods and services, which would, otherwise, be purchased in the market, such as fetching water, gathering fuel and fodder, grinding cereals, maintaining cattle, kitchen gardens, weeding, winnowing, harvesting, and a myriad other functions such as tailoring, maintaining the house structure and repairing it, and tutoring children. Hence, it can be said very confidently, that there are fewer women than men who do not work at all. In fact, if women work outside the home, they are consistently working a double (and when children etc. are ill, a triple shift), day after day. Women, on an average, have much longer total hours of work than men.<sup>1</sup>

One-third of women, at least, and in some instances, a higher proportion, are the sole supporters of their families. This has been brought out in many research reports. A recent study of two villages, sponsored by the Health Task Force of the Commission, in a chronically drought-prone area in Maharashtra also very clearly brings out the contribution of the women workers in the economy of the area. The major source of income for women in this area was work in the Employment Guarantee Scheme. The men went in for work on private sites. For the same work, women received less than half of what the men received. Yet, in 20 per cent of the households women's income was 100 per cent of family income. In another 20 per cent of the households, women's income constituted at least 50 per cent of the family income. This in effect meant that women worked at least twice as much as the men in economically

productive work, and her income was the mainstay of the family's economy.

In addition, the women were also responsible for almost 100 per cent of the housework - "socially productive labour". They were also responsible for 100 per cent of the "reproductive labour" --- the bearing and rearing of the children.<sup>2</sup>

Thus, the contribution to society made by their work is far greater than that of men. Though fewer women than men, have opportunities to work outside the home, the work which women do within the home--cooking, washing and cleaning, caring for children and the old, nursing the ill, fetching fuel and water, etc., -- is work which is crucial to the survival of society. If women stop doing this work, and no one takes it up, all factories, transport, construction, food-production and so on will come to a standstill, disease and hunger will spread, and very soon people will start dying. So if we look at the social usefulness of their work alone, it looks as if women ought to have more bargaining power than anyone else, because it is their work which produces, nurtures and sustains the people, who produce everything else, including profits. But this is not at all the case. In fact, quite the opposite.<sup>3</sup>

The fact that women are house-workers as well, affects their status within wage-work adversely. It confines them to badly paid work, marginal jobs, which are supposed to be 'women's work'. Though women-headed households constitute a large proportion of households in the



country, yet the idea of the working woman only "supplementing" the household economy has become a structural feature of the job market and, despite legislation, women continue to be pushed into low-paying categories of jobs, which remain low-paying because women work in those jobs. Instead of enhancing women's status, each of the different roles women play, while performing the different aspects of social labour, works against the other roles. This is reflected, among other things, in the fact that women have to work up to the last day of pregnancy and return to work within a month, endangering their own health and that of their children. This vicious circle, rather than being broken, is reinforced by other factors, thus depressing the situation of women further.

The truth is that the contribution of women to the family, and to the economy, has not been evaluated, quantified, or even recognised. One has merely to shut one's eyes and visualise an all-women's strike for just a couple of weeks and see the massive chaos, destruction and havoc that would ensue - at least a couple of times greater than an all-men's strike. Hence, the statistics regarding the contribution of women's work is not even the tip of the iceberg. On the contrary, the figures indicate not the extent of women's labour, but only the extent to which it is even marginally recognised and paid. It indicates that a greater part of it is unpaid and that the burden and loss is women's alone.

This situation is all the more true, regarding the health status of women, especially that of the vast majority

of labouring, poor women -- those who are unorganised, self-employed and remain unprotected. This section constitutes more than 94 per cent of the women workforce of this country. And is increasing each year, as less and less women continue to be absorbed in the "formal" sector.<sup>4</sup> Besides, the few opportunities available especially to the women in the informal sector to participate in other areas of life, depend crucially on their access to the opportunity to be healthy. On the other hand, the obstacles to their achieving even the simple state of well-being are tremendous and emanate from almost every institution and structure with which they are in relationship, even remotely. As poor women have no access to education or training, and in order to make both ends meet, they have to work, most often, in the unorganised industry, where working hours are long, and the pay is meagre, they have little choice to refuse jobs which are hazardous to their health. On the other hand, they cannot take time off from their work, either for illness or before and after their delivery. Their access to health care is reduced considerably by the distances to health care facilities, lack of time to go there, the difficulty in making the other members of the household interested in their health needs, and the costs. All these factors play against them. These very factors make the women more vulnerable to various chronic and acute illnesses, most of which, like anaemia, they carry along with them and suffer till they become severe, handicapping, and fatal.



## FINDINGS

### A. Some Common Problems Related to Occupations in the Informal Sector

In terms of the health problems women workers face specifically in their occupations, certain trends and tendencies about the nature of women's work and their health problems are discernible:

#### 1. Problems related to the posture at work

The paper-bag makers in Delhi live with constant stress and exhaustion, thus falling prey to a host of chronic illnesses . Their bodies ache from constantly sitting in one position, their backs grow bent from constantly having to stoop. They suffer particularly from pain in the back, shoulders and waist, and stiffness in joints. Their eyes ache and water from hours of strain.<sup>5</sup>

This is as much true about beedi workers, zardozi and zari workers, chikan workers, lace makers, weavers, gunny bag stitchers, carpet-makers, tagai workers and an entire work force of women who are involved in strenuous work, usually working at home.

#### 2. Problems of being in contact with hazardous material

Constant contact with dyes, woodsmoke, cashew oil, gases like carbon monoxide and formaldehyde, chemical fumes in the electronics industry, tobacco dust, oils, and silica dust, is an occupational hazard.

The cashew workers in Kerala say,

After working in this department for a month, our fingers start burning because of the extra oil coming out when we break the shell on the machine. Boils and abscesses appear on our hands.

The fingers of the women look as though they have been afflicted with leprosy. Protective gloves are not given to the women.<sup>5a</sup>

The Binotashale stone dust, which is thrown in the air while producing slate-pencils in the Mandsaur district in Madhya Pradesh, is, in fact, lethal. Inhaling of this dust causes a disease - silicosis, which is exacerbated by increase in the severity and duration of exposure. The mean age of the workers who were killed was 34.65 years.<sup>6</sup> There have been 3,000 deaths of state-pencil workers in the last decade.<sup>7</sup> The use of chemical fertilisers creates skin reactions on hands and feet.

Different chemicals, fumes, and dust have affected women workers in occupations as diverse as houseworkers, domestic workers, and washer-women, on the one hand, and photo-copying, electronics on the other with mining, agriculture, construction somewhere in between. However the effects on women's health have been as disastrous - with severe morbidity, a slow process of death, to sudden fatalities, due to accidents.

### 3. Problems related to their work environment

These include, lack of light, latrines, water, ventilation, space. Small, poorly-lit and ill-ventilated homes, in crowded mohallas and streets, serve as both



the living space and workplace for almost all home-based workers.<sup>8</sup> Inadequate lighting, long working hours with extremely fine, minute work like chikan embroidery, lace-making, zari and zardozi embroidery, and tagai work cause severe problems like poor vision, eye-strain and headaches, and also accidents.

In the small-scale factories too, women work in cramped conditions in rooms which have extremely high temperatures - glass industry, garments etc. In the garment factories, women are often employed to iron the finished garments. Many women are known to have fainted due to the heat and humidity in the atmosphere. Most of these factories do not even provide women with toilet facilities. As a result, women try and eat and drink very little during the day. This results in constipation and other related health problems.<sup>9</sup>

Women in the mining industry, in agriculture, women vendors<sup>10</sup> have the opposite problems - having to work in the open all through the day, in the hot sun or rains. This, apart from other effects, causes them to sweat, losing very precious water and salts.

#### 4. Problems related to their work actions

Tying, stitching, banging, lifting, bending. More than 3,000 women in Jaipur are involved in the tying process of the tie and dye work. They spend almost the entire day tying extremely minute designs on yards and yards of cloth. They have deep cuts and dents on their

fingers from the metal contraption they have to use and from the thread. (personal conversations).

The block-printers in Ahmedabad manually print sarees and bed-sheets. The blocks are dipped in the semi-liquid colour and placed carefully on the cloth and then the women have to strike the top of the block twice or thrice rapidly and hard, usually with both their hands in turn, sometimes with one. In one minute, they print about 12 times, i.e.,  $12 \times 3 = 36$  strokes with their hands and shoulders. Their fingers become rough due to the constant contact with the dye. The sides of the palm, which they strike on the block, are hard and have toughened. Their arms and shoulders too ache very badly. (personal conversations).

#### 5. Problems related to lifting weights

Lifting heavy weights is one of the "job descriptions" of women involved in construction, on employment guarantee schemes and brick-workers. These give rise to health problems like menstrual disorders, prolapse of the uterus, miscarriages, back problems, especially those relating to the spinal column, causing serious long-term repercussions.<sup>11</sup> Accidents and injuries, to the children are also other serious health problems the women have to face, due to non-availability of creches at the work-site where the children play around.

#### 6. Problems related to their long hours of work

Most of the serious health problems get aggravated due to the long hours of work the women have to put in.



The postural problems that women in beedi-making, chikan, zari, zardozi, paper-bag making, lace-making, and houseworkers face, get much worse as the women work for 8 to 14 hours a day, day after day. The chemicals, fumes, gases, dusts that women miners,<sup>12</sup> women in slate-pencil making, in electronics, in fish-processing, and in cashew, face, worsen the health problems and culminate in serious morbidity or even death due to the long period of exposure each day. Continuous actions like bending, crouching, banging, lifting, also aggravate the health problems.

This takes place 1) due to longer and continuous exposure; 2) and due to the non-availability of rest in order to recover from the health impairment due to continuous work.

#### 7. Problems due to the repetitiousness of the movements

When women lift heavy weights, there are certain problems women face, prolapse of the uterus, miscarriages and back problems. But when they do the same work over and over again, the health problems are compounded many times more.

On the other hand, when women in the electronics industry spend day after day fitting in the circuits and use only one part of their bodies, hands and shoulders, in repetitive movements, they often suffer from a condition termed tenosynovitis.<sup>13</sup> Also repetitive movements dull the mind to a drugged state which, on the one hand, cause extreme fatigue of the mind and, on the other hand, is known to cause accidents which may be dangerous to life or limb.

## 8. Problems related to technology

Technology has been a double-edged sword, especially because in this society, the controllers of technology and the ultimate users of it are totally different sets of people, with different interests and concerns. Most technological developments which are introduced, are with the aim of maximising profits. These may not have positive effects, and, often, do negatively affect the people involved in production, especially women workers. Thus, on the one hand, machines are being introduced to make beedis faster, or in the bead-piercing activity, or in weaving, or in the coal mines, but it results in the displacement and retrenchment<sup>14</sup> of women workers, without offering them any alternatives, either in employment for the existing workforce or, alternative training facilities for the future workforce. Thus as the already meagre sources of livelihood and survival are diminishing, many women will be forced to do more strenuous work or be more malnourished.

On the other hand, work which is strenuous and hazardous, due to the primitiveness of the methods and tools, is left untouched by technology e.g. harvesting and weeding, or the means of improving the work methods remain beyond the means of most women e.g. LPG cylinders instead of the primus stove or the woodfuel.

The use of technology, through mechanisation of certain production processes, has not only increased, but qualitatively and quantitatively worsened, the health hazards for certain sections of the workforce. The use of machines in the production of slate pencils as well



as in mining, has rendered finer, the silica and other dust flying in the air, and hence, respirable. However, there is no accompanying investment in measures to protect workers from the ill-effects of this "technological advance". Hence, this dust is not obstructed in the nasal passage, but passes smoothly upto the lungs. The older workers in the Mandsaur slate-pencil factories have noticed that both morbidity and death have increased since the advent of the machines in the slate factories.<sup>15</sup>

#### 9. Problems related to mental health

The very unorganised nature of the "informal sector" exposes the women working in it to various forms of oppression, including sexual oppression; they vary from rape, forced prostitution and sexual harassment to wife-beating, the sexual division of labour at home and at work, and restrictions on the freedom to move about.

The constant tension and anxiety of this situation, results in continuous stress on the women. While men workers experience exploitation at the workplace, women workers experience both exploitation and oppression, not only at the workplace, but also in society and at home.

Sexual exploitation is regularly experienced by almost all sections of women in the informal sector, for example, nurses experience it from doctors and village politicians;<sup>16</sup> women domestic workers, from the masters of the houses they work in;<sup>17</sup> women sweepers<sup>18</sup> and rag-pickers,<sup>19</sup> from their male colleagues; prostitutes,<sup>20</sup> from the police<sup>21</sup>, the clients and the local goondas; the vendors,<sup>21</sup> from male buyers and sellers, the gate-keepers of the buildings they go to sell their wares and from the police; for the workers

in the processing industry and small-scale factories,<sup>22</sup> from their supervisors, employers and male colleagues; for women working in agriculture,<sup>23</sup> from the landlords, employers, and the forest guards etc.

#### B. Specific Health Problems Related to their Occupations

Following is a tabular representation of some of the known health hazards in various occupations in which women in the informal sector are involved, and some concrete recommendations to improve their conditions of health. Some points need to be kept in mind while noting the contents:

1. These are some of the known health problems. Considerable research needs to be undertaken to find out more about these occupations, as well as others which are not researched at all.
2. Almost every woman in the informal sector does a multiple of roles and activities. They are involved in activities like housework, child-bearing, child-care, fuel and fodder gathering, carrying of water and many others, besides their economic activity. Thus, the hazards that women have to face are multiple and also affect women in their multiplicity.
3. Most women in the informal sector also face a number of health problems by virtue of being poor, labouring women - malnutrition, anaemia, discriminatory treatment, multiple pregnancies, severe deficiencies, the burden of contraception, sexual assault and harassment and mental trauma.

The occupations, some of the known health hazards and some of the concrete recommendations are as follows:



Occupations and Some  
Causal Factors

Manual 24-33  
Agricultural workers

(Postural problems  
exposure to dusts  
and chemicals;  
unguarded implements;  
working barefoot)

Health Problems

General

Generalised body ache; aches  
in calves, hips, back, legs  
and shoulders; nasal catarrh  
irritating coughs, irrita-  
tion of the respiratory  
system; respiratory allergies;  
respiratory tract infections;  
tightness of chest; chest  
opacities; pneumoconiosis;  
cutaneous allergies; skin  
irritation; rashes and pru-  
ritus; mycosis; eye irrita-  
tion; paddy keratitis; hel-  
minthiasis -- schistosomiasis,  
ankylostomiasis; paronocia;  
fungal infections in feet;  
eczema; osteomyelitis of  
fingers.

Injuries

High rate of thresher acci-  
dents, especially while cru-  
shing sugarcane and ginning  
cotton; also serious physi-  
cal injuries occur from the  
cutting edges of implements,  
such as sickles and machetes;  
for lack of first-aid faci-  
lities, small injuries be-  
come serious and often develop  
into tetanus.

Recommendations

- 1) The hours of work should be regulated through the guarantee of a living wage and security of alternative employment in cer-  
tain periods.
- 2) Proper implementation of laws regarding guarding of machinery.
- 3) Warning and training about the use of chemicals.
- 4) Provision of protective equipment.
- 5) Alternative work allocation during pregnancy and in the post-natal period.
- 6) Education and dissemination of information about the pos-  
sible health hazards.
- 7) Research into the toxicology of the materials used.
- 8) Provision of health and medi-  
cal facilities.

Occupations and Some Causal factors

Health problems

Recommendations

Toxicities

Pesticide poisoning; intestinal respiratory and neurological disorders; nausea; vomiting; abdominal cramps; diarrhoea, cough; headaches; vertigo; blurred vision; muscular twitching; convulsions; loss of reflexes; loss of sphincter control; disturbance of equilibrium; jaundice; coma, and, ultimately, death may result by respiratory arrest.

Gynaec

Abortions; premature deaths and still births; high rate of neo-natal, infant and maternal mortality.

Bleeding of fingers

Cotton-pickers and Pod-openers<sup>34</sup>

(lack of personal protective equipment; heavy workload due to piece-rates)

Plantation workers<sup>35-37</sup>

(inhalation of dust; exhaustion due to heavy work-loads, further increased by piece-rated wages and by high environmental temperatures and humidity; lack of health and medical

Lung infections and bronchial problems; physical stress; malnutrition; Helminthie infestations; dysenteries; contact dermatitis and other contact diseases; heat strokes; high incidence of maternal and child mortality

1)Provision of personal protective equipment;

2)Payment of daily wages.

1)Regulation of hours of work, through guaranteeing a living wage and regular employment.

2)Provision of personal protective equipments.

3)Provision of health and medical facilities,

4)Alternate work allocation during and after pregnancy.



Occupational and some  
Causal factors

services, working  
bare-foot)

Health Problems

Recommendations

5) Warning and training about the  
use of chemicals.

6) Education about the possible  
health hazards.

1) Provision of personal protec-  
tive equipment;

2) Reduction in workloads by  
providing a living wage on a  
daily or time basis.

3) Provision of medical and health  
facilities.

Insect and snake bites; aller-  
gies; occupational asthma;  
irritation of bronchi; pesti-  
cide hazards; accidents and  
falls due to steep slopes;  
pain in back due to carrying  
heavy loads.

Pain in joints; cuts in feet;  
miscarriages; high rate of  
infant mortality. (Personal  
Conversations)

Pneumoconiosis (a collective  
name of lung diseases caused  
by the continued inhalation  
of dust); increased respira-  
tory ailments; cancer of the  
lungs; stomach, liver, kidneys  
and the central nervous sys-  
tem are affected by toxic  
dusts; deaths due to accidents.

1) Provision of sheds.

2) Instituting a scheme of trained  
mobile paramedics as exists  
for mobile teachers in Kashmir.

1) Reduction in dust levels;

2) Immediate implementation of  
existing laws.

3) Proper diagnosis and treatment.  
50.

4) Workers should have the right  
to decide the safety of the mine  
and act on it.

5) Regulation of working hours  
through guaranteeing a living  
wage.

38-39

Tea-pickers  
(Working with unsafe  
chemicals; unsafe  
work terrain)

Nomadic sheep-herders  
(Continuous walking  
over rough terrain;  
lack of medical  
facilities)

40-51

Mine-workers  
(exposure to min-  
eral dusts; extremely  
hazardous working  
conditions; lack of  
timely diagnosis)

Occupations and some causal factors  
Quartz-Crushers  
 - and mine workers

Quarry-workers  
 (Chrome)  
 (Exposure to high temperatures; lack of eye protection)

Construction workers  
 (heavy work load; unsafe noise levels; exposure to dusts and chemicals; accident-prone working conditions; contract labour)

Employment Guarantee Scheme Workers  
 (postural problems;

Health Problems  
 Silicosis; cough and expectoration; dyspnoea; chest pain, high mortality rates among young workers.

Heat strokes; severe eye problems as chips of alloys fly into the eyes.

Physical stress and strain; skeletal defects; numbness of hands and fingers; loss of hearing; stress; high blood pressure; muscular pain; intestinal problems; gastroenteritis; respiratory problems; asthma; silicosis; asbestosis; skin diseases; heat cramps and sun burns; serious accident injuries, deaths; spontaneous miscarriages; high rate of infant mortality; a feeling of isolation and rootlessness.

Backaches; abdominal pains; pains in hands, feet knees, and shoulder-joints; increase

Recommendations  
 6) Provision of comfortable personal protective equipment.  
 7) Provision of health and medical services  
 1) Frequent rest periods;  
 2) Provision of sheds and rest rooms;  
 3) Provision of drinking water and mineral salts at the work-site  
 4) Provision of personal protective equipment.

1) Regulation of employer-employee relations;  
 2) Strict provision of scaffolding  
 3) Reduction in noise levels;  
 4) Provision of personal protective equipment;  
 5) Alternative work for women during and after pregnancy  
 6) Guarantee of a living wage.  
 7) Reduction in working hours.

1) Proper wage rates to make possible frequent rest periods.



Occupations and some causal factors

unsafe implements; lack of sheds; heavy work-loads; lack of health and medical services)

64-65

Brick-workers

(Lack of personal protective equipment no precautions for work in hot atmosphere; contract and bonded labour; continuous heavy work loads, even during pregnancy)

66-67

Salt-kiln workers  
(Lack of personal protective equipment; working in the hot sun; unsafe working conditions)

68-69

Hand-cart Pullers  
(heavy work, even during pregnancy)

Health Problems

in pain in the knees with age; splitting headaches, and migraines; nausea; giddiness; vomiting; loss of appetite; leucorrhoea; cramps in legs; dizziness and abortions.

Heat exhaustion; burn blisters and wounds on hands; constant infections of the wounds; cracking, roughening and blistering of hands; aching of feet; pain in shoulders, back and neck; coughing; chest pains; premature aging; injuries due to accidents to the women and children; prolapse of the uterus, often resulting in hysterectomies; miscarriage, sexual exploitation.

Heat strokes; constant bleeding in the feet; injuries due to accidents.

Heavy muscular exertion; thickening of the skin in the hypogastric region (lower part of the abdomen); thickening of the palms; more calories spent than recovered every day; menstrual problems; repeated miscarriages.

Recommendations

- 2) Provision of sheds and drinking water
- 3) Alternative work during and after pregnancy e.g. running creches at EGS work-sites.

- 1) Regulation of employment
- 2) Frequent rest periods
- 3) Provision of sheds and water and mineral salts.
- 4) Alternate work during and after pregnancy
- 5) Personal protective equipment
- 6) Provision of first aid facilities.

- 1) Regulation of employment.
- 2) Personal protective equipment
- 3) Provision of sheds and drinking water and mineral salts.

- 1) Provision of better-designed hand-carts
- 2) Subsidised loan facilities for investing in the improved hand-cart
- 3) Provision of alternate work during and after pregnancy.



Occupation and some causal factors

Fuel and Fodder

70-75  
Gathering

(postural problems; long hours of walking and carrying loads)

76-77  
Carrying of Water  
(heavy physical strain, even during pregnancy)

78-81  
Head-loaders

(heavy work-loads; hazardous work terrain; work during pregnancy too; sexual harassment)

All workers involved in Manual labour

(lifting heavy weights; postural problems; heavy work-load; continual heavy work from childhood through illnesses, pregnancy and in the post-partum period to old

Health Problems

Great physical strain and distress; postural defects, like bent backs; long hours of walking and carrying loads; pain in legs, calf muscles, shoulders and arms; thorn pricks; falls from heights; sexual harassment.

Physical strain; intense pain in different parts of the body, especially the legs, waist, hip bones and shoulders; prolapse of the uterus; miscarriages.

Accident injuries; insect-bites; thorn-cuts and skin burns; tetanus; eye problems; lung congestion; respiratory problems; tuberculosis; high rate of infant mortality and miscarriages; mental tension.

Disturbances of blood circulation in the pelvic organs and lower limbs; menstrual disorders; prolapse of the uterus; miscarriage or still birth; flat and narrow pelvis, if carrying weights from early age; risk of injury to spinal column and adjacent muscles, especially in the lumbar region; circulatory organs may

Recommendations

1) Provision of alternate, easily available fuel.

2) State-owned fodder farms which are easily accessible, without harassment to the women.

1) A well-researched and properly planned scheme for the provision of clean, drinking water to every house be worked out immediately on a war-footing.

1) Provision of personal protective equipment.

2) Provision of alternate work during and after pregnancy

3) Provision of medical facilities at work-sites.

1) Provision of compulsory and free education with stipend for girls;

2) Research on ergonomics and working out good postures and training workers in these.

3) Developing of safe and efficient implements



Occupation and some  
causal factors

age;nutritional  
deficiency).

Health Problems

be affected; deformities;  
callosities; neuritic pains;  
paralysis.

Recommendations

- 4)Training of doctors in Occupational Health
- 5)Legislating a comprehensive act on the working conditions of workers, to include maternity benefits, leave provision,health insurance, a living wage,security of employment, and old age pensions.

- 6)Availability of first aid and other health and medical services
- 7)Regulation of hours of work through guaranteeing a living wage and security of regular employment
- 8)Easy accessibility to drinking water and fuel and fodder.

- 9)Education and awareness building of the women, the policymakers and the people, on the issue of women's occupation-related health problems should be initiated immediately through the mass media.

Service Sector

Domestic Workers 82-90

(postural problems;  
working in water and  
with household chemical-based products)

Frequent colds;bruises;acid  
burns and other burns;chronic  
body ache; postural problems;  
bursitis.

- 1)Free personal protective devices should be provided to protect domestic workers against harm from chemical-based products

Occupations and some  
causal factors

Health Problems

Recommendations

2) Protection in terms of wages, employment security, health provisions, paid sick leave and old age pensions should be given to them.

3) Training facilities for alternate skills should be provided

<sup>91</sup>  
Washer-women  
(working in water;  
continuous use of  
chemical-based pro-  
ducts)

Cancer, mainly of the kidneys and genitals, also of the bladder, skin and lymph tissue; irritation of the eyes and upper respiratory tract; acute chest pain; fatigue; drowsiness; memory impairment.

1) More research needed

2) Substitution of unsafe chemicals by safer ones.

3) Personal protective equipment should be provided, especially water-proof foot and hand protection and aprons.

Sweeper and Scavenger

<sup>92-93</sup>

Women

(Working in the open elements and with infectious rubbish heaps)

Nausea; burns, rashes and sores on hands and feet; insect bites; viral infections; fever; headaches; body aches; exhaustion.

<sup>94</sup>

Rag-pickers  
(working in the open elements and infectious rubbish piles)

Dog-bites and glass-cuts; skin diseases; virus infections like 'flu, colds and coughs, headache and fainting.

clothes.

4) Regular medical watch about skin disorders.

1) Personal protective equipment must be provided against burns, rashes, sores and fumes

2) Alternative training facilities and alternate employment should be provided.

1) Alternate income-generation schemes and training should be provided

2) Effective medical facilities and protective equipments to be provided



Occupations and some causal factors

95-104  
Prostitutes  
(transmission of infections from clients, treatment by quacks)

Health Problems

Sexually transmitted diseases; ectopic pregnancies; backstreet abortions; miscarriages; constant pain in the abdomen; uterine and vaginal infections; leucorrhea; pelvic inflammatory diseases; impaired fertility; sterility; irregular menstruation; possibility of giving birth to deformed and visually handicapped children; tuberculosis and other diseases like jaundice and typhoid; skin diseases like scabies; fevers; colds; coughs; asthma; anaemia; stomach ulcers; dizziness; guilt feelings; emotional deprivation; depression.

Health Personnel  
(transmission of infections from patients; Government coercion)

105

Recommendations

- 1) Alternate income generation schemes must be initiated for those who would like to leave this occupation.
- 2) Housing schemes for prostitutes should be evolved to free them from the clutches of brothel-keepers.
- 3) Decriminalisation of prostitution, without legalising it should be legislated.
- 4) Awareness-building among the workers about the possibility of occupational diseases.

1) Implementation of ILO Recommendations (Recommendation No. 157, Convention No. 149). Some of these are:

- regular medical examinations
- more research on specific risks
- personal protective equipment
- compensation

2) Hours of work should be regulated.

3) Provision of safe housing.

Occupations and some causal factors

Masala-pounding

106

Workers

(repeated lifting of arms inter-changeably while pounding; constant friction of the hand; skin irritation and irritation of mucous membranes due to the masala)

Health Problems

Back pain; body ache; chest pain; headache, pain in arms and legs; pain in shoulder joints; coughing; sneezing, abdominal pain; burning sensations (especially in hands); blisters and callouses; eye problems; burning sensation while urinating; white vaginal discharge; dizziness and exhaustion.

Recommendations

- 1) Regular free medical check-ups and treatment are necessary
- 2) Training facilities for alternative employment should be provided.

107-116

Vendors

(working in the open; walking long distances; carrying weights; harassment by police and licensing authorities)

Coughs; colds; fever; eye complaints; constant headaches; pain in hands and shoulders; stiffness in hands and hips; backaches; extreme fatigue; mental tension.

- 1) Women vendors should be given protective devices for their hands, feet and head, including lighter load-carrying devices, like, folding wheel barrows.

- 2) They should have the right to free movement in the country and licenses should be issued to any woman who wants to vend her wares.

- 3) All necessary steps must be taken to stop harassment, intimidation, extortion by police and other officials and authorities.

- 4) Protected vending places should be built at locations convenient to both the consumers and the vendors.



## Occupation and some causal factors

### All Women Workers in the Service Sector

(Uncovered body parts in contact with water for long periods of time; contact with dirt infected by microbes, viruses; exposure to hazardous chemicals and the elements; transmission of infections from other people, due to close contact; lifting of heavy weights frequently; postural problems; accidents; low nutritional status; lack of facilities like toilets, drinking water, rest rooms, low wages and insecurity of employment)

## Health Problems

Chronic body aches; chills; cold; bursitis; cancer of kidneys and skin; respiratory problems; insect bites; infectious and contagious diseases; skin diseases; burning sensations in hands, and abdomen; eye problems; injuries to feet hands and palms; sexual harassment and abuse; harassment by officials and the police.

## Recommendations

- 1) Regulation of hours of work through a living wage is necessary.
- 2) Provision of personal protective equipment for work, where body parts in constant contact with water and where heavy loads are carried.
- 3) Unsafe chemicals to be substituted.
- 4) Provision of training and alternate employment
- 5) Provision of powerful, local exhausts.
- 6) Medical monitoring and free good medical treatment.
- 7) Doctors trained in Occupational Health to be provided in comprehensive medical scheme including maternity benefits.
- 8) Strict regulation of the powers of officials; stopping police harassment of prostitutes, ragpickers and vendors.
- 9) Education and awareness-building of the women workers, the policy-makers and the people, on the issue of women's occupation related health problems should be initiated immediately through the mass media.

Occupation and some causal factors

Home Based

House-workers  
117-121

(exposure to dust, fumes, fuel smoke, chemicals in household products; possibility of accidents; heavy workload; drudgery; postural problems; mental tension)

Cough and expectoration; bronchitis; emphysema; irritation of eyes, nose and throat; skin wounds, skin reactions; eye diseases; physical pain; exhaustion; anaemia; hastening of tumour; heart disease - cor pulmonale; carbon monoxide toxicity; impaired foetal development; severe depression; low self-esteem.

Health Problems

Recommendations

- 1) Hours of work should be regulated
- 2) More research in and easy availability of safe cooking fuel e.g. LPG Cylinders;
- 3) Availability of and education about better abrasive cleaners;
- 4) Provision of personal protective equipments;
- 5) Sharing of work by others including men in the household;
- 6) Provision of community kitchens, community child-care and laundries.

Beedi-workers  
122-134

(postural problems; exposure to tobacco dust and nicotine; cuts due to injury; repetitive movements constant friction on fingers).

Neck and low back pain; pain in hands and fingers; abdominal pain; burning sensation in the throat; cough; chronic bronchitis; asthma; palpitation; body ache; eye problems; giddiness; effect of nicotine on reproductive functions; amenorrhoea; leucorrhoea; general fatigue; anaemia.

- 1) Lessening of work loads through a regular fixation of wage-rates
- 2) Reduction in dust levels
- 3) Development of suitable implements to avoid postural problems
- 4) Regular medical check-ups and treatment.

Chikan workers  
135-137

(postural problems; allergies; low nutritional levels; continuous strain on

Back-aches; spondylitis; fatigue; failing eye-sight; tuberculosis; lung function disorders; allergic effects; Vitamin-D deficiency; goitre.

- 1) Development of appropriate implements to avoid postural problems



Occupation and some causal factors

eyes and working in ill-ventilated and badly lighted atmospheres)

Health Problems

<sup>138-139</sup>

Lace-workers  
(postural problems; repetitive movements; eye strain and working in ill-ventilated and badly lighted rooms.

Headaches, low back pain; finger aches, muscle-pain; eye problems

<sup>140-142</sup>

Agarbatti-workers  
(postural problems; reaction to chemicals and non-availability of personal protective equipments)

Low back pain, pain in hands palms, and fingers; contact dermatitis; skin abrasions.

<sup>143</sup>

Paper-bag makers  
(Postural factors and lack of personnel protective equipments for hands and fingers, repetitive uncreative work)

Bodyaches; constant pain in the back, shoulders and waist; backs grow bent; stiffness in joints; hardening and cracking of skin; deep cracks along fingers; discolouring and

Recommendations

- 2) Regular eye check-ups and provision of free spectacles.
- 3) Programme to provide iodised salt and Vitamin-D.
- 4) Provision of a living wage.
- 5) Provision of alternate employment

- 1) Provision of frequent rest periods
- 2) Provision of a living wage and regular employment.

- 1) Research on and provision of substitute, safe work-materials.
- 2) Provision of personal protective equipments
- 3) Provision of a living wage and regular employment.

- 1) Training in good postures
- 2) Provision of personal protective equipments for hands.

Occupation and some causal factors

Health Problems

Recommendations

itching of fingers; eyes pain and water;tuberculosis;lack of Vitamin-D;constant acidity; heart disease; dulling of the mind.

3)Provision of regular employment or alternate employment

Zari and Zardozi<sup>144</sup>  
workers

(postural factors; long hours of work; fine, minute work in ill-lighted rooms)

Weakening of eye-sight;chronically hunched backs; aching in hands and fingers; legs ache; chronic head-aches; body aches.

1)Research into and development of ergonomically correct tools is necessary.  
2)Health education for proper postures should be initiated through worker's education boards

3)Reduction in workloads through better wage-rates.

4)Facilities like proper lighting at the work place i.e. at home should be provided.

Carpet weavers<sup>145</sup>  
(postural factors; long hours of minute work)

Eye problems; pain in joints

1)Postural trainin and facilities like proper lighting should be provided.

2)Reduction in workloads through better wage-rates.

Weavers<sup>146</sup>  
(postural problems, and badly-lighted rooms)

Backaches; eye problems

1)Facilities like proper lighting and postural training. Also development of ergonomically correct tools.

2)Reduction in workloads through the guarantee of a living wage.

Papad-workers  
(excessive workloads;postural problems; lack of

Pain in the chest, shoulders, legs and hands(personal communication)

1)Reduction in workloads can be achieved through an increase in wage-rates, as well as regulation of hours of work



Occupation and some causal factors

facilities at home)

Block Printers  
(repetitive movement of banging the block; constant contact with the chemical dye; postural aspects)

Health Problems

Tuberculosis; chest pain; difficulty in breathing; roughening of fingers; hardening of palms; aching and numbing of fingers; hurting of hands; skin irritation and itching; giddiness; miscarriages. (personal conversations)

Tagai-workers

(postural problems; minute stitching work; low nutritional level)

Aching of feet and low back pain; eye pains and weakening eye-sight; extreme fatigue and weakness. (Personal conversations)

Gunny-bag Stitching Workers  
(constant exposure to and inhalation

Weakening eye-sight; headaches; backaches; feet aches, fever, asthma; breathing problems; intermittent,

Recommendations

2) Periodic rest intervals during work.

- 1) Workloads should be reduced through guaranteeing a living wage
- 2) Personal protective equipment should be provided.
- 3) Alternate employment should be provided.
- 4) Pregnant women should be given paid leave or provided with alternate employment

- 1) Regular and free medical check-ups, especially eye check-ups should be undertaken. Spectacles should be provided free.
- 2) Facilities like proper lighting should be provided.
- 3) Workloads should be reduced by providing the women with a living wage
- 4) Women workers should be provided with postural training.

- 1) Powerful local exhausts
- 2) Regular medical check-ups and treatment, especially for respiratory problems

Occupation and some causal factors  
of cement dust;  
postural problems;  
low nutritional level)

Chindi-workers  
(exposure to dust;  
heavy workload;  
low nutritional status)

Tie-and-Dye workers  
(postural problems;  
cuts due to the metal  
contraption used;  
excessive workload)

## Health Problems

shallow cough; tuberculosis;  
loss of appetite, extreme  
fatigue. (Personal conversations)

Chronic cough; hurting and  
watering of eyes; headaches;  
giddiness; blanking out;  
severe pain in the lower  
abdomen; scanty periods with  
clots and other menstrual  
irregularities; exhaustion.  
(Personal communication)

Constant cuts and dents in  
fingers; paining of the  
fingers and arms; eye pain,  
back aches, especially low  
back pain; severe pains in  
the abdomen. (Personal communication)

Shoe-embroidery workers

Back pain, especially low  
back pain; eye problems;

## Recommendations

3) Provision of training and  
alternate employment

- 1) Powerful local exhausts.
- 2) Regular medical check-ups  
and treatment, especially for  
respiratory and gynaecological  
problems.

1) Research on and development  
of tools and implements which  
are ergonomically more scientific.

2) Postural training should be  
given to the workers.

3) Personal protective equipment  
should be provided especially  
for the fingers.

4) Hours of work should be re-  
duced through guaranteeing a  
living wage and security of  
employment.

1) Postural training should be  
given to the workers.



Occupation and some causal factors

(postural problems; minute eye-straining work)

Bead piercing workers and

Bangle workers

(postural problems; minute work)

Charkha-spinners

(Constant use of shoulders, arm and fingers for pulling the thread; postural problems)

Health Problems

extreme fatigue. (Personal communication)

Back pain; weakening of eyesight. (Personal Communication)

Aches in shoulders and upper right arm; back aches; finger aches; respiratory problems. (Personal communication)

Recommendations

2) Facilities like proper lighting of homes.

3) Hours of work should be reduced, through guaranteeing a living wage and security of employment

4) Provision of personal protective equipment for palms and fingers.

1) Research and development of ergonomically better tools and implements.

2) Postural training should be given to workers.

3) Facilities like proper lighting should be provided in their homes at subsidised rates.

4) Regular medical check-ups and treatment.

5) Provision of training and alternative employment.

1) Levels of cotton dust, and fibres in the atmosphere need to be monitored and controlled.

2) Workloads should be reduced through a guarantee of a living wage, security of employment and facilities at the work-site i.e., at home.

Occupation and some causal factors

Tailoring workers  
(postural problems;  
heavy work on the  
machines)

Ready-made Garments  
<sup>147</sup>Workers (home-based)  
(postural problems;  
heavy work load)

<sup>149</sup>Brass-ware workers  
(Hot atmosphere;  
accident prone work)

<sup>150</sup>Basket-weavers  
(handling rough  
sharp-edged surfaces)

<sup>151</sup>Pottery-painters  
(exposure to lead)

Supari-cutters  
(Postural problems)

Health Problems

Low back pain; leg pains; eye  
problems (Personal conversa-  
tions)

Postural problems-back, espe-  
cially low back pain; eye  
problems; anaemia; leucorr-  
hea; urinary tract infections.

Respiratory disease; eye  
problems; heat exhaustion;  
accidents.

Bleeding of hands; low back  
pain.

Lead poisoning

Aching of hands and shoulders.

Recommendations

Regular eye check-ups and  
development of machines-heights  
to suit women's height.

1) Necessity of reduction in  
workloads through guaranteeing  
a living wage.

2) Proper facilities like ligh-  
ting, ventilation should be  
provided.

3) Research and development of  
machines to suit the height  
of women.

1) Regulating work on the guide-  
lines given in the encyclopaedia  
by the ILO for heat stress.

2) Regular check-ups and treat-  
ment for respiratory problems.

1) Provision of personal protec-  
tive equipment.

2) Provision of a living wage as  
well as alternate employment.

It is necessary to control  
exposure to lead and to sub-  
stitute the presently used un-  
safe chemicals by safe ones.

1) Research on and development of  
alternate proper instruments.

2) Reduction in workloads through  
guaranteeing a living wage.



Occupation and some causal factors

Workers Ironing Clothes 153

(Excessive workloads)

Knitting workers

(Exposure to allergens.)

Reed workers 154

(handling rough sharp edged material)

Health Problems

Pains in hands and shoulders.  
(Personal communication)

Allergic asthma

Cutting and bleeding of palms and fingers; back aches.

All women workers working in home-based occupations

(Exposure to dusts, such as tobacco, cement, house-dust, exposure to hazardous chemicals, carbon monoxide, lead, abrasive cleaners, fungi; drudgery; repeated movements of a few parts of the body; heavy work load; postural problems without respite; constant strain on eyes due to poor lighting; low nutritional status and work valued

Respiratory problems; hastening of tumours; digestive problems; adverse effect on reproductive systems; fatigue; skin problems; back, particularly low back pain; pain in limbs; body aches; stiffness of joints; weakening of eye sight; heart diseases; acidity; ulcers, exhaustion and dizziness.

Recommendations

It is necessary to reduce the workloads through guaranteeing a living wage.

It is necessary to monitor workplaces for levels of allergens and control of allergens at workplaces.

- 1) Personal protective equipment should be provided to the workers
- 2) First aid facilities should be provided at the work-sites.

- 1) Research on and development of hazard free cooking facilities like smokeless chulhas, bio-gas or LPG gas stoves. These should be widely distributed.
- 2) Regulation of working hours of the workers through:

- a) guaranteeing a living wage.
- b) security of employment.
- c) leave and holiday provisions

- 3) The workers should be further protected by means of legislation and ensuring that they receive:

- a) maternity benefits and antenatal care
- b) creche and anganwadi facilities
- c) basic facilities like drinking water, electricity, toilets

Occupation and some  
causal factors

less in money terms  
as well as in terms  
of status)

Health Problems

Recommendations

d)old age pensions

4)Workers should be provided with work space near the home and credit facilities for production shelters. Housing norms should provide for work-space needs.

5)Personal protective equipment should be provided to the workers.

6)Postural training and other preventive health education should be initiated through the Workers Education Board.

7)Research on ergonomic aspect of homebased production should be initiated immediately through National Research and Design Institutes, with a view to suggest possible modifications in the work posture and process, and to develop simple, inexpensive preventive and protective equipment. This should be done in consultation with workers.

8)Education and raising of awareness of the women workers, the policy-makers and the people



## Occupation and some causal factors

### Health Problems

### Recommendations

should be undertaken through the mass media. This should include:

- a) the sort of work women do;
- b) the health related and specific health problems they face
- c) the reasons for these problems
- d) the various possible solutions to reduce and stop these.

### Processing Workers

#### Fish-processing 155-158

(working in ice-water; heavy seasonal work; fluctuations in work quantum; injuries due to handling fish)

Extreme fatigue; back ache; leg pain; chest congestion; peeling of skin; skin infections; numbing of fingers; scratching, blistering and bleeding of hands; burning and stinging pains in hands.

#### Cashew workers 159-161

(constant contact with corrosive, black fluid; hard nut splitting; postural problems)

Burning and corroding of hands; allergy; dermatitis; hand-injuries; boils and abscesses on hands; severe respiratory problems; back pain due to crouching position.

1) It is necessary to provide the workers with the necessary personal protective equipment

2) The workers should be able to take frequent rest periods during work

3) Guarantee of a living wage, continuous employment and facilities at work-sites.

1) Personal protective devices which do not hinder the free and fast movements of the hands and are comfortable e.g. gloves.

2) Timely treatment of skin problems.

3) Guarantee of a living wage, regular employment and facilities at work-site.

Occupation and some causal factors

Coir-workers 162-165

(sitting on wet ground; unprotected hands; exposure to coir dust; lack of early detection of elephantiasis)

Coir Yarn spinners  
(handling rough surfaces).

Wool workers 166  
(exposure to dust and fibres)

Glass workers 167  
(extremely hot atmosphere; cuts due to glass splinters)

Health Problems

Respiratory and cardiovascular complaints; asthma; cough; expectoration; dyspnoea; precordial pain; palpitation; haemoptysis; skin diseases; elephantiasis; leprosy; hyperkeratosis; neurological disorders.

Hand injuries - linear abrasions of the skin of the palm; pain and bleeding due to injuries. (Personal Communication)

Respiratory allergies like allergic rhinitis and allergic bronchitis; pulmonary tuberculosis.

Extreme thermal stress; cuts and burn injuries sometimes requiring stitches;

Recommendations

- 1) Local exhausts should be provided.
- 2) Regular medical check-ups and treatment, especially for respiratory problems, and diseases like elephantiasis are necessary.
- 3) Workloads should be reduced through a living wage, security of employment and facilities at work-site.

- 1) Personal protective equipment, especially for hands and palms should be provided.
- 2) Living wages, regular employment, medical facilities and old-age pensions.

- 1) Personal protective equipment should be provided
- 2) Regular medical check-ups and treatment for respiratory problems should be provided
- 3) Living wages and security of employment.

- 1) Workers should be provided with clean drinking water and mineral salts
- 2) Frequent rest periods and personal protective equipment should be provided



Occupation and some  
causal factors

Pottery workers<sup>168</sup>

(continuous exposure  
to silica dust)

Health Problems

Fibrosis of lungs; silicosis;  
tuberculosis;

Recommendations

- 1) Regulation of hours of work through a living wage and regular employment
- 2) Powerful local exhausts should be provided.
- 3) There should be monitoring of the workplace for the extent of dust present and the size of dust.
- 4) Regular medical check-up and treatment for lung problems should be provided

Garment workers<sup>169</sup>(factory)

(Postural problems;  
eye-straining work;  
repetitive movements;  
lack of facilities,  
like toilets)

Pain in arms and legs; back pain, especially low back pain; swelling in limbs; pain in the neck and abdomen; persistent muscular pain; headaches; fever; eye problems; eye strain; visual fatigue; dizziness; exhaustion; insomnia; finger injuries; leucorrhea; burning and itching sensation while urinating.

Electronics workers<sup>170-171</sup>

(handling small,  
numerous parts;

Eye problems; tuberculosis; pneumonia; stomach problems like ulcers; fatigue; loss of appetite; skin diseases;

- 5) Living wages and regular employment.

- 1) Rotation of work, proper lighting, regular medical check-ups, especially eye check-ups should be provided

Occupation and some  
causal factors

exposure to hazardous  
chemicals; drudgery;  
postural problems)

172-173  
Slate-pencil workers  
(Exposure to fine  
silica dust)

Health problems

frequent sore throats; cold;  
backaches; insomnia; depres-  
sion; anxiety.

Dry cough; cough with expect-  
oration; breathlessness;  
haemoptysis; chest pain;  
weight loss; fibrosis of  
lungs; irritation of bron-  
chial mucosa, silicosis;  
clubbing of fingers; dimi-  
nished chest movements;  
crepitations; rhonchi; early  
deaths.

Recommendations

2) Security of employment and  
living wage

- 1) Powerful local exhaust should  
be provided
- 2) Regular medical check-ups  
and treatment for respiratory  
problems should be provided
- 3) Training for and employment  
in alternative jobs should be  
initiated.
- 4) Schemes for young children  
should be initiated whereby  
compulsory, free education  
with a substantial stipend be  
made available to them.
- 5) Regulation of hours of work  
through guaranteeing a living  
wage.

Matches and Fireworks  
workers  
174-175  
(exposure to hazar-  
dous, explosive  
chemicals; postural  
problems)

Chemical toxicity; explosive  
accidents; dermatitis; back-  
aches.

- 1) It is necessary to monitor  
the work-sites to avoid ex-  
plosions.
- 2) Regular monitoring for levels  
of chemicals should be provided
- 3) Safer chemicals should be  
substituted instead of the  
present unsafe ones.

4) Children should be given a  
substantial stipend to continue  
education and vocational train-  
ing.



Occupation and some causal factors

Workers in Beedi-<sup>176</sup>  
Tobacco Processing  
(exposure to nicotine and tobacco dust)

Health Problems

Nausea; giddiness; vomiting; headaches; tiredness; loss of appetite; weakness.

Soap workers<sup>177</sup>  
(exposure to chemicals and hot solutions)

Burns and scalds, including chemical burns; allergy.

Small-scale pharmaceutical workers<sup>178-180</sup>  
(heavy workload; exposure to chemicals; postural problems)

Extreme fatigue; weakness; back-aches; aching of arms, feet and shoulders; eye-strain; low resistance to the effects of the chemicals they handle.

Recommendations

- 1) It is necessary to monitor the levels of tobacco dust and use powerful exhausts to get rid of these
- 2) The workers should be provided with personal protective equipment.
- 3) A living wage and regular employment are necessary.

- 1) The workers should be given personal protective equipment
- 2) The atmosphere and processes should be monitored to make them safer.
- 3) For workers who are allergic to the fumes, alternate employment should be provided.

- 1) Workloads need to be reduced
- 2) Work-systems like rotation of jobs, need to be worked out, to avoid eye strain.
- 3) Postural training needs to be initiated
- 4) Levels of chemicals in the air, need to be controlled.

## Occupation and some causal factors

### Workers involved in Processing and other industries

(body exposed to ice-cold water; corrosive fluids; wet grounds; constant exposure to dusts, such as, silica, fibres, allergens; infections due to work; repetitive, monotonous work; drudgery; eye strain; injuries due to sharp-edged, rough surfaces; postural problems; contact with extremely hazardous and explosive chemicals; lack of facilities like toilets, drinking water, rest rooms; low wages and insecurity of employment; low nutritional status)

## Health Problems

Extreme fatigue; pain in body; corrosion of hands and feet; peeling of the skin; silicosis and other incurable and fatal respiratory problems such as fibrosis; clubbing of fingers; serious injuries; skin diseases like dermatitis; elephantiasis; backaches; allergies; weakening of eye sight.

## Recommendations

- 1) Protective equipment should be provided to workers to protect them from hazardous chemicals, constant exposure to water and dusts.
- 2) Dust and fibre levels at the work place should be monitored.
- 3) Strict supervision to prevent accidents is necessary.
- 4) Workers should be given frequent rest periods. This should be made legally obligatory.
- 5) Proper facilities at the work-sites should be made obligatory, eg, proper lighting;
- 6) A medical scheme should be evolved for workers which includes, among other things:- regular medical check-ups and treatment, training of especially women doctors in Occupational Health issues, maternity benefits, regular rest periods, leave and holidays.
- 7) Regulation of hours of work through a living wage, employment security and old age pensions.



### Occupation and some causal factors

### Health Problems

### Recommendations

8) Education and raising of awareness of the women workers, the policy-makers and the people, should be undertaken, through the mass media. This should include:

- a) the type of work women do.
- b) the health-related and specific health problems they face.
- c) the reasons or causes for these problems
- d) the various possible solutions to reduce and stop these.

### C. General Aspects of Physical Health

The most common occupational hazard for all women, is, probably overwork. Though it is generally thought that the man is responsible for farm work assisted by the woman, in most cases, it is the woman who does the farm work assisted by the man.<sup>181</sup>

A study of labour in both homes and fields in Haryana, by Shanti Chakravorty, has for instance revealed that the average working day for women was between 15½ to 16 hours. This was also found to be true in many other studies.

This is true for almost all women in India. However, over-working tends to take place in a situation which has further grave implications for the health of women. The health status of women in India, as indicated by demographic statistics, is a matter of serious concern. The higher mortality rate is only one of the many grotesque indicators of her poor health status and poor access to health care facilities.

An important underlying reason for the poor health of women, especially among the poor, labouring women, is the malnutrition from which they suffer right from birth to death.

### Nutrition

The nutritional status of women has shown no improvement and, if anything, seems to have deteriorated over the last few years, perhaps, at a faster pace than the rest of the population. The per capita calorie intake in the country as a whole declined from 2,445 in 1961 to



2,170 in 1971 (NSS estimates). The worst sufferers, paradoxically, are the agricultural labourers, people living in slums, in drought affected areas and in remote tribal areas, but among all these people, the axe has fallen mostly on women.<sup>182</sup>

Malnutrition in women has further been aggravated by repeated pregnancies and lactation. It is stated that the average Indian woman becomes pregnant 8 times and gives birth to 6 to 7 children of whom, 4 to 6 children survive, The infant is breast fed for at least 2 years or until the arrival of the next child. Therefore, out of 30 years of reproductive life, she spends 16 years in pregnancy and lactation.<sup>183</sup>

Due to chronic malnutrition, women have no energy reserves for emergencies, and hence, fall ill, or at least feel ill, more often. Also their mortality rates are higher in the event of an epidemic. This could also result in early wearing out of cells and, hence, early ageing. In India, about 60 to 80 per cent of women suffer from varied degrees of anaemia. In fact, it has been estimated that 10 to 20 per cent of all maternal deaths are due to nutritional anaemia. Women do not receive the additional nutritional requirement, so essential during pregnancy and lactation. For instance, during pregnancy, while it is recommended that she gets at least 2,500 calories, in fact, she receive only 1,440 calories. She needs 55 gms. protein, but gets only 37 gms. She needs 40mgm. of iron but receives only 18 mgm.<sup>184</sup> She needs 1 gm of calcium but receives a mere 0.2 gm. The differences between what is needed and what she actually gets, are even more marked during the period of lactation.

Iron deficiency anaemia also results in constant tiredness, causing blackouts, general disinterest in work and lowered resistance to infections. It is an entirely preventable problem.<sup>185</sup>

The morbid effects of malnutrition are well documented, like toxæmia of pregnancy, post partum haemorrhage and now, malnutrition is suspected to cause psychiatric problems in women, lowered resistance to fatigue, affecting working capacity under conditions of stress and increasing susceptibility to many other diseases. Maternal malnutrition also influences reproductive performance, affecting pelvic size, birth weight of child, lactation and breast feeding.

Besides these, there are a considerable number of problems, women, which especially poor, labouring women, suffer from in their lives. These are menstrual and menopausal problems, dysmenorrhoea, white discharge, uterine bleeding, back pain and migraines.

There are also other social conditions which affect women's health which are reflected in statistics like the low sex-ratio in the country, high infant mortality, especially female infant mortality, female infanticide and female foeticide, neglect of and discrimination against girls, early marriage and child-bearing, high maternal mortality, hard work, low levels of education, problems relating to reproduction and contraception.

#### D. General Aspects of Mental Health and Social Exploitation

"Occupational health should aim at the promotion and maintenance of the highest degree of physical, mental



and social well-being of workers in all occupations....."  
 Definition of Occupational Health by the joint ILO-WHO  
 Committee.

An important aspect of a woman's mental health is the feeling of security or insecurity vis-a-vis her own being. The very unorganised nature of the "informal sector" and the women working in it, exposes them to various forms of oppression, including sexual oppression. The forms of sexual oppression experienced by the women are numerous: they vary from rape, forced prostitution and sexual harassment to wife-beating, job insecurity, the sexual division of labour at home and at work and restrictions on the freedom to move around as they please. On the other hand, women face the cruel side of "freedom"-contraceptives, which are dangerous and yet under experimentation, repeated abortions, all dumped on them.

Women workers suffer a peculiar form of oppression on the work-site, in the home, and in society at large - sexual harassment. Most women also experience active or passive discrimination at the work-site. They are given the least skilled, the most monotonous and often the more hazardous jobs, as well as, often being paid less than men for the same or similar work. Certain operations in agriculture like weeding are "reserved" for women. This operation involves constantly bending for all the eight hours that women work. They are also paid less. In the beedi industry, men often work in factories and women at home, doing the same work and getting very different wages and benefits. In the electronics industry, women do the assembly work and men do the supervision.

At home, women are kept in a subordinate position, denied any decisive say in family matters, and often beaten, or otherwise ill-treated. Women are the last priority even in the family, the last to eat and the last to get medical treatment. Even when they work outside and are economically productive, the work at home is her responsibility alone - from getting water from long distances to fodder gathering, to household chores. Besides this social productivity, the entire responsibility of reproduction and child-rearing is on women. This is also true about contraception.

Another aspect of harassment that almost all women talk about is the harassment at home due to drunkard husbands. As a pheriwali in Bombay said "when my husband died, I felt I was better off. Even if I eat dry bread, at least I eat it in peace. What did I get from marriage, but scoldings and beatings?" Women vendors in Madras had a similar experience. A fruit vendor in Madras said, "At night, I bear the brunt of a different harassment".<sup>186</sup>

Other types of harassment that women workers in the informal sector have to put up with are the contradictory expectations from her different roles. They are often the major, if not the sole-supporters of the family. But their role as home-maker and a mother is expected to be fulfilled just as well. Besides, the strain of the entire workload and responsibility, is the constant feeling of guilt, generated by having to share herself between home and work demands, which gradually becomes a part of the personality of women. If a child is ill, if there's not enough food



or money, or any child is hurt, it is somehow the woman's responsibility, her blame and her guilt.

Similarly, there is the idea of female seclusion in its various forms and degrees and there is also the pressure on women to perform as workers, as housewives, as mothers..... There is an implicit demand that women workers be superhuman beings, but not show it, because then it becomes threatening to the male ego. And that too is dealt with in this society, by punishing women. Even as late as 1982, there have been instances in Bihar and Maharashtra<sup>187</sup>, where women have been branded as witches and killed. -- burnt or stoned publicly.

The pressures that women workers have to live under, the stress and strain of the entire situation, have physical repercussions, as well as an impact on their entire emotional, psychological ability to cope with their lives.

#### E. Technology and Women's Health

The impact of technology on women has been in two basic ways:

- 1) By displacing women's labour
- 2) By increasing women's burdens and socio-economic vulnerability

Technology has the potential to affect women's health both positively and negatively and both directly and indirectly. Studies in 'developed' or 'boom' areas of the country show that the health and nutritional status has

actually deteriorated, and the incidence of low-birth-weight babies and neo-natal mortality has increased. This is due to the fact that workloads have increased resulting in a greater expenditure of energy, without a proportionate increase in their intake of calories. This results in an under-nourished, over-worked, and unhealthy woman, unprotected by any labour laws or social security.

There are also a number of cases where the introduction of few technological processes themselves harm women's health. Industries like electronics, pharmaceutical, matches, slate-pencils, indicate these hazards which result in serious health problems - respiratory, eye problems, postural complaints, skin irritations and premature deaths. Such direct effects on health are largely due to the fact that technologies have been developed for productivity and profit, with workers' safety, posture and overall health not entering the process of decision-making. And with avenues of employment being so limited for women, they are unable to organise or demand safety measures, even when they are well aware of the impact of their work on their health.

Ironically, several medical technologies, ostensibly evolved for improving the health of the people, and particularly of women, have created precisely the opposite effect. The best example of this, is in the area of contraceptive technology. With the Government obsession about population increase, the entire burden and responsibility of birth control has been placed on women, and specifically on poor women. However, the contraceptive techniques thrust upon the women have two invariable adjuncts.

1. They are technologies which are outside women's control, requiring trained professionals to install them



or provide follow-up e.g. IUDs, tubal ligation, injectable contraceptives, laproscopic tubectomies.

2. They are technologies which can be hazardous to women's health at two levels; (a) either because the technology itself has side effects (as is the case with injectables and intra-uterine devices like the loop and the copper-T) or because (b) to be safe, the technology has to be applied by highly-trained and experienced hands, and within an environment where sterile conditions and adequate after-care are scrupulously maintained. Under the present conditions, where mass laparoscopy camps, with inadequately trained doctors and unhygienic conditions are the order of the day, such technologies place women at an even greater risk.

Women suffer from serious health problems - excessive bleeding, cramps, backaches, headaches, dizziness and swellings after IUD insertions, laparoscopic sterilization and most of all, injectable contraceptives like Net-En and Depo-Provera.

Amniocentesis-cum-abortion clinics are proliferating all over our country, without let or hindrance from either Government or Medical bodies. Ill-equipped and poorly trained doctors and technicians are performing this test, which requires a high order of skill, on thousands of women; with disastrous results in many cases: rupturing of the amniotic sac, and deaths from anaphylathic shock or haemorrhage are some of the known consequences. Preying on the socially-enforced desperation for a male child, these clinics also perform abortions on women at dangerously advanced stages of pregnancy, with inevitable results on their health, and sometimes on their lives.

These are only some of the most serious and widespread problems created by so-called health technologies. Far from improving or preserving the fragile health status of women, they often actively endanger it. Therefore, the whole question of technology and women's health, must be seriously re-examined in this context, particularly where the technology is not within women's control or where it facilitates the existing negative attitudes to women or promotes male-domination.

Another area for concern and action is related to the lack of technology and the consequences to women's health. Examples of this are numerous. The absence of simple technologies, for domestic fuel for cooking and heating, for implements and tools which will reduce the drudgery, energy-intensiveness and health hazards of women's work, is a major lacuna.

The problems here are of three kinds: (i) where technologies have been developed, but have not reached the majority of poor women for structural, administrative, or other reasons. The smokeless chula is an excellent illustration of this. (ii) Where no technologies have been developed for easing or facilitating women's work, because the latter is itself a low priority in research and development. For instance, simple tools, implements or protective devices can be developed and distributed to women working in coir-yarn spinning, rope-making, tie-and-dye, beedi-rolling, transplanting rice, shelling prawns, etc. These could be cheap, simply designed, mass-produced by other women, and save them from untold miseries and illnesses. The fact that little or nothing is, in fact,



available, in a nation capable of space satellites and nuclear power, speaks eloquently of the low value placed on women's labour and health; (iii) Where technologies have been developed but are inappropriate or unviable for poor women because they have not been consulted or involved in the planning, development, and prototype-testing phases. Several illustrations can be given, but the coir-yarn spindle and solar cooker best symbolise the problem.

From the above, it is obvious that the basic concerns and, hence, the direction of technological changes and advances, needs to be reversed. Designing and development of basic tools for easing women's efforts, not dispensing with labour, and improving their health status, are an urgent priority—bio-gas installation, tools, implements and protective devices, together with subsidies and/or loan facilities for women to be able to avail themselves of these, is urgent.

## RECOMMENDATIONS

### Integrated Approach to Health

While making recommendations for the future relating to the health of women in the informal sector, it is necessary to underline the existing situation in terms of women, work and health very explicitly.

The larger situation is one of invisibility of women's labour, de-valuation of women's labour, non-recognition of women as human beings, and of their role in social labour and social production. It is also a situation where the basic sexual division of labour is not merely an important aspect of the relationships within the family, but has become a structural aspect of the labour-market and of the wage structure. It is a situation where even the most basic national priorities do not feature women's health and work positively. If there has been any emphasis, it is mainly on the reproductive and maternal roles in the usual Maternal and Child Health (MCH) programmes, but this too has been extremely minimal. It is an atmosphere which is both class-biased as well as sex-biased, grinding down poor, labouring women in all aspects of their life. These aspects of the situation today have serious implications for women:

1. Women's work, unrecognised, de-valued and constricted by the sexual division of labour, consists of economically productive labour, socially productive labour and reproductive labour. Even when women are not employed, they are involved in socially productive and reproductive labour, all of which is absolutely necessary for the continuation and reproduction of society.



Precisely due to this, most women are not, and cannot be, involved in a single occupation all their lives. Very few women, as opposed to the majority of men, can be said to be employed or working in one sector of work all their working lives, except for housework and child-bearing and rearing.

2. Most of the problems, especially the health problems that women face, are related to their general life situation. These aggravate the problems women face in their work situation as workers. These general problems include nutrition, accessibility to health services, water, housing, sanitation, maternity benefits, and child-care, control over their own bodies, opportunities for education and training, their status within the family, as well as situations that affect their mental and emotional health, that is, economic and job insecurity and helplessness due to harassment and discrimination.

It is necessary to tackle these together with the health problems women face directly related to their work. This is extremely important because it is not accidental that certain sections of women work in the informal sector of the economy. Working in the informal sector is a part of a self-perpetuating vicious circle, which requires much more than small-scale temporary palliatives to see that the women are able not only to survive, but to leave it once for all. This vicious circle consists of the following cycle: women working in the informal sector, hence women living in the poverty sector, hence, living in unhealthy conditions in bastis, hence, less nutritious food leading

to ill health, hence, also, less opportunities for education and training, and thus being compelled to work in informal sector.

3. The work and the conditions in which women do it, are so unhealthy, because women constitute the lower-most stratum of society. Women workers in the informal sector constitute a sub-proletariat. Thus, the nature of work, the security of employment, the wages, the conditions of work, are extremely exploitative and give rise to a number of health problems for the women workers. And because of the informal nature of their work, no mechanisms of redressing their grievances and health problems have been evolved.

Problems relating to the work of the women workers in the informal sector are: low wages, insecurity of employment and seasonal employment, long hours of work, no provisions for leave or holidays, no maternity protection, no health provisions or schemes, no insurance or old age benefits.

Most of the health problems that the women workers in the informal sector face, relate to the complexities of their lives and the deeper social mechanisms and structures underlying their situation. This complex situation, therefore, demands a multi-faceted approach. The basic aspects of this approach may be summed up broadly as:

It is not sufficient to provide health needs, without at the same time, attacking these underlying structural factors of exploitation and lopsided control of resources, which result in the cycle of poverty, underemployment and unemployment, pushing large numbers of the rural and urban



poor in the informal sector which, perforce, only permit very marginal levels of living. Health is no longer seen as a service without an integrated approach to the community and its problems. Similarly, packaging health services for women in the informal sector, without, at the same time, affecting their levels of living, including a living wage, improved conditions of work, a safe and hazard-free work-place as well as protective equipment, controlled hours, benefits such as for health, maternity, creches and old-age pensions, sanitation, housing and potable water, near to their home in quantities necessary for family health, will be a purposeless exercise. Health must be understood in the context of this total scenario to affect the conditions of women in the informal sector.

We make the following suggestions with regard to women, health and work.

#### General physical health needs

1. As has been pointed out in chapter VII of the report nutritious and sufficient food is a crying need of the women workers in the informal sector. Specific nutritional programmes which include calcium, proteins iron and, Vitamin-D, could be initiated through the government health care system.

A nation-wide programme for the distribution of nutritious, subsidised food supplements which includes calcium for women should be organised, on the lines of a similar programme of milk and egg powder in the 1950's.

Coarse grains like ragi, as well as milk must be made widely available at subsidised rates. Since all women in poverty work to eke out a living, they should be the major beneficiaries.

2. A very basic presupposition of health is the availability of and easy accessibility to clean, drinking water. Lack of it, especially in times of severe drought, is the cause not only of immense hardship to women, but the cause of morbidity and mortality of millions of children every year. After 40 years of independence, thousands of villages in our country do not have access to this basic human condition of life. It is of utmost importance that the Government takes up this issue on a warfooting and devises schemes to remedy this situation. While all women would benefit, those in the informal sector, who carry a heavy work-load would benefit particularly by such easy accessibility to safe water supply, which would reduce their drudgery.

3. As an increasing number of women move out into the job-market, one of the important problems they face is the lack of housing facilities. From this point of view too, housing, including subsidised hostels for working women with and without children, is increasingly being felt as an important need by women workers. Housing is an important issue for women workers also in the context of a change in the man-woman relationship that our country is going through. An increasing number of women are becoming sole or major earners, and an increasing number of them, especially those who have jobs or occupations, are refusing to live a life of complete subordination



and subjugation. An important obstacle in their being able to assert themselves is the fact that often houses and property are in the name of the man and inexpensive housing is difficult, if not impossible today. Schemes for giving housing to the poor, should allocate substantial quotas for single women, especially those with children. For the rest, they should allocate land pattas and housing jointly in the names of both husband and wife.

4. Most women in the unorganised sector live in slums, pavements, bastis and other makeshift shelters. It is necessary that, for a start, the people in bastis, slums and pavements be given adequate subsidised housing, with adequate drinking water and sanitation facilities. The houses need to be close to their place of work, and space provided for conducting home-based production activities. Credit should be provided for building production shelters. Women's work-space needs should be incorporated in the housing norms of the housing schemes of the State and the area should be a minimum of 200 square feet.

5. Regular work and a living wage should be guaranteed to all women. It has been the experience of most women that after they start working for a wage, though their income is distributed in the family, there is a definite change in the family diet pattern in her favour. Very rarely do women receive an increase, proportional to their contribution, as many socio-political factors intervene. Yet, security of a regular wage would make a definite positive contribution to the health of the women workers.

6. In view of the fact, that children, especially small girls, in poor families have to stop education and begin work at an early age, and usually it is hazardous work, we make the following suggestion: Girls should be given a substantial stipend for completing their education, which could be combined with training and production which is useful, but not hazardous.

#### Mental health needs

Mental health is an important element in the general well-being of women workers in the informal sector. Physical insecurity and the anxiety due to it, often lead to psychological ill-health. Besides, a feeling of helplessness and vulnerability paralyses women workers still further. Hence, it is necessary that:

1. There should be stringent punishments for rape, sexual harassment, eve-teasing and other actions threatening women. The Government should legislate a Prevention of Violence Against Women Act to cover harassment at work-sites, homes, streets, police stations, and prisons.

Work-site harassment also be included in labour laws and be included in the Industrial Disputes Act, where the burden of proof be on the man.

2. There is also the need for a Prevention of Domestic Violence Act to cover specifically wife-beating, child-battering, molestation, marital and domestic rape and mental cruelty.



3. Since seclusion is a reason causing immense mental and physical problems for women workers, especially some sections of home-based workers, conditions should be created so that it is unprofitable to keep women secluded. This could be done by offering substantial stipends or financial assistance to women for training and education. These training centres should also have creche-facilities. The Government should also subsidise community centres with recreation, entertainment, sports and counselling services.

4. All necessary steps must be taken to stop harassment intimidation and extortion of women in the informal sector, by the police and other officials and authorities.

5. The Law of Evidence must be changed, in view of the fact, that many of the most serious crimes against women, are committed in situations without witnesses e.g. rape, dowry harassment, marital violence and sexual assault.

#### Availability of and accessibility to health care facilities

Increasing the availability of, and the accessibility to health care facilities, are important in order that the recent positive advances against diseases reach the mass of poor women. Statistics on health facilities and their use indicate that women go to hospitals and contact medical functionaries less often than men. Studies also indicate that, the amount of money spent by households for medical treatment is greater for men and boys than for women and girls. The result is higher morbidity and mortality among women, including a very high maternal mortality rate.

When women do go to seek medical help, they experience great discrimination at the hands of the medical profession. It is necessary to tackle these problems at a social level as well as at the level of the medical system, which, as has been pointed out, is both anti-women and anti-poor. It is necessary to critically evaluate this bias in the present health-care system and attempt to change it radically. In fact, the entire medical education in the country needs to be evaluated. There should be Refresher/Orientation courses for the doctors on subjects of women's work and health. It is necessary that the medical education should recognise occupational health hazards especially in the informal sector. These should be a part of the regular courses in the curriculum. It was especially evident to the Task Force that the Preventive and Social Medicine Departments had not even considered the possible problems of health of this sector. In spite of letters to all the PSM Departments, hardly any response was received. A few visits to PSM Departments by the Task Force and by the National Commission also brought to the fore this neglected area which requires to be studied by both medical personnel, social scientists and professional social workers.

While ensuring better choices for women, including women's access to safe deliveries and safe and free abortions, it is necessary to stress the immediate abolition of the oppression that comes directly from the Government--pressure on women both as promoters (ANMs teachers, nurses) and as receptors of family planning methods, the target approach to family planning, and the promotion of dangerous methods like injectable contraceptives and amniocentesis.



In fact, the entire emphasis on 'Family Planning', to the detriment of access to other health care facilities, needs to be strongly opposed, not only because it is oppressive, in itself, and has caused misery to millions of poor women in the country, but also because it discredits the public health system and makes poor women workers dependant upon private, exploitative medical practitioners, or they have to do without any medical facilities, even when they desperately need these for abortions, deliveries and serious illnesses.

Besides, the primacy of free, effective health care for the poor and for rural areas needs to be emphasised, rather than the sophisticated medical facilities for a few which today consume a major share of health care finances. Certain concrete steps need to be immediately taken to facilitate the reaching of health-care to the poor, labouring women:

1. The timings of the dispensaries and hospitals should be fixed in a way which would be convenient to working women, who cannot forego their income for medical care.
2. Necessary medicines should be adequately stocked and the hospitals and PHCs should be operated in such a way as to keep the number of visits of the women to the minimum necessary, if they are to avail of the treatment, otherwise, they get discouraged and do not continue, because of the competing demands on their time as they carry multiple responsibilities.
3. There should be a 24 hour creche facility for women patients with children in every hospital and PHC.





4. Women should be allowed two free bus-rides to the nearest PHC every month.

5. Because they are already poorly nourished, illness complicates this condition further. As food is a significant component for effective recovery, hospitals should provide free food to women.

6. Dais who are the only source of help for the majority of women, should be taken seriously, as a vital source of rural health care. Their skills should be enhanced via on-going training and their regular involvement in public health work should be encouraged.

7. Women should be involved at the village level as Community Health Guides if women's access to health care is to be improved. Teams comprising of one literate and one experienced older woman, though not necessarily literate, may be the most desirable, both in terms of outreach and accessibility to women. Their training should include both preventive health education and curative care. Mahila Mandals should support these women health workers and assist in the maintenance of linkages between the official health care system and village women.

#### Occupation Related Recommendations

Women workers are involved in the three crucial types of work, productive social and reproductive. These women workers need, as well as have a claim to certain facilities, by right. It is necessary that these rights be recognised through the following measures:

##### 1. Living Wage

Living wage should be assured through legislation and the organisation of women to demand and protect their

rights. Without assuring adequate wages, it is meaningless to discuss health or measures to ensure health. This needs to be given priority, especially because today women work hard for long hours for a miserable pittance.

## 2. Paid leave and holidays, including two weekly offs

In the formal sector, workers are entitled to a break after four hours of work as well as leave provisions and two paid weekly off. These are provisions the workers have won after decades of struggle, because it is physically absolutely necessary, if one's health is not to break down completely. These provisions need to be extended to the workers in the informal sector too.

## 3. Regulation of working hours

This is particularly necessary in the informal service and production centres, where there is considerable exploitation of the poor with long hours and no over-time. Piece-rates should be converted into daily wages, based on the normal quantum of work completed at a healthy pace. Only then, will women not work long hours to make a meagre living.

## 4. Maternity benefits

A majority of the women workers, in almost all the sectors, have to work till the last day of pregnancy and go back to work immediately after a few days. This affects the health as well as, the life expectancy of both the child and the woman. It is absolutely necessary that women are entitled to paid maternity leave, as well as nutritious food, during pregnancy and after delivery.



## 5. Health Insurance

Health insurance, including compensation for accidents, should be available to women workers. Health cards should be distributed to them, as is supposed to be done in the beedi-industry, but is not effectively implemented. Through this, they would be entitled to receive health care of their choice at any public health facility (Primary Health Centre, sub-centre, ESIS Hospitals, Municipal dispensaries, T.B. hospitals, general Government hospitals, etc.) and/or recognised private facility upto a certain stipulated limit. The latter is necessary because workers are often located far from any Government facility, have no transport, or money for any transport that is available, and often find the timings of the Government facilities, unsuitable. In addition, in medical emergencies (complications during childbirth, accidents, etc.), the nearest facility may be a private one.

Accident insurance for both temporary and permanent disabilities, monetary and health benefits, should be available through both public health and private facilities as mentioned above.

## 6. Provision of a safe work-place and safety equipment, (Including personal protective equipment)

Ideally, it should be insisted that every workplace should assure safety to the workers. This may imply mechanisation of processes which are hazardous. This, in turn, means loss of jobs/work for the women, which cannot be permitted until there is alternate safe work for women, and new training facilities for them. This is an important

element in improving the health of women. Till then however, it is necessary to provide safety equipment including powerful exhausts to remove harmful dust from the work environment and personal protective equipment like masks, feet protectors, eye glasses, ear muffs, gloves and other comfortable, strong contraptions for the safety of women workers.

### 7. Labour Commissioners

Today, there is an appalling neglect of this sector by the various offices of the Commissioner of Labour in the states. They should be made more accountable for their work in the informal sector .

### 8. Health education

Preventive health education, both with respect to occupational and other health problems (anaemia, leucorrhea etc.), should be initiated through the Workers' Education Board. Special training courses for women workers should be initiated through these boards.

### 9. Old-age benefits and pension schemes

Due to the very nature of work in the informal sector, as well as the conditions in which the women live and work, women age very early in life. During their working life, they live a hand-to-mouth existence and are not able to save anything for their old age. Hence, they are forced to continue to work or are reduced to beggary, if they find it physically impossible to work. Old-age security and pension is an absolute must for this section of the population. Every woman has added to society's benefit and should receive protection in old age from it. Hence, it should not be necessary to require absolute indigence



to merit a pension. On visits to the states, the plight of widows and deserted women, with sons, who were alcoholic and did not care for their aged parents, was pathetically distressing. Because the women had sons, they were not entitled to a pension. These women had been self-respecting workers all their lives, but were reduced to almost a state of beggary.

#### 10. Basic facilities

Facilities like latrines, drinking water, ventilation, should be made available to women's workplaces and living places, as lack of these seriously undermines the health of women workers.

Electricity should be made available on a priority basis to workers, particularly those whose trade adversely affects their eye-sight (includes chikan and ready-made garment workers, zardozi workers, weavers and others). Electricity should be supplied to women workers at non-industrial/non-commercial rates.

#### 11. Creche facilities

Creche and anganwadi facilities should be made available at women's workplaces and/or living areas.

#### 12. Subsidized tools of trade

Subsidized tools of trade, which reduce occupational health problems, should be made available to women workers.

13. The State should provide credit to women, (and small consumption loans, for investing in bettering their working conditions.

14. A comprehensive Health and Safety Act should be evolved and enacted. This Act should give the workers:

- a) right to information about chemicals and work process at the work-site.
- b) right to inspect work-sites
- c) right to demand guards for machinery, monitoring and controlling levels of dusts fumes and fibres in the work atmosphere.
- d) right to demand personal protective equipment, and
- e) right to stop work if the conditions are found unsafe.

This Act should be evolved in consultation with workers, trade unions and concerned voluntary agencies.

#### 15. Introduction of new technology

Before introducing any new machinery, equipment or process, these should be screened and approved by representatives of women workers involved in that particular occupation where these are to be introduced. The women workers should have statutory rights to screen and approve new machinery, equipment or process, or any changes in the existing ones.

#### 16. Priorities in research

Indian Council of Medical Research, National Institute of Occupational Health, National Institute of Design, and such other organisations, should undertake occupational health studies of women's work. These should be done with a view to developing simple preventive and protective mechanisms and machines acceptable to workers which would reduce health problems.



Special emphasis must be placed on the ergonomic aspect of women's work, including postural problems. Innovation in the production processes which could reduce health problems should be examined, with workers guiding and advising throughout, and such innovations be recognised and rewarded.

### Technology Related Recommendations

We can summarise here some criteria for scrutinising the potential negative and positive effects of technology on women and their health:

1. All technologies which are likely to directly and indirectly increase women's workload must be accompanied by other technologies or measures to ease or ~~eliminate~~ eliminate these side effects. In other words, a systems approach should be used to develop packages, rather than the current uni-dimensional approach. These multi-faceted packages must be gender-sensitive and women-biased.
2. The development of new technologies for traditional, or even modern occupations, must be prioritised, beginning with women's occupations. In other words, technology development must be selective, designed to impact positively on women's health in relation to their work, whether wage-work or non-wage work.
3. Development of simple or appropriate technology in the form of tools, implements, and protective devices to remove or reduce the work-related hazards faced by women, must be given top priority and taken up on a war-footing. Mechanisms must be created for involving the women themselves in the research and development process, so that the results are appropriate and useful to women.

4. In the specific area of health technology - particularly contraceptives and sex-determination techniques - strong and immediate steps must be taken to withdraw or ban such technologies where they are actually damaging the health of already vulnerable poor women. Measures for women's education and health promotion must be strengthened.
5. An advisory committee, with some power of veto, must be set up at Central Government level to monitor the impact of technology on women. The Committee should also actively identify and promote the areas for research and development of technologies, which make work healthier for women.
6. Existing technologies, which are not appropriate to women, though they are almost exclusively utilised by women (sewing machines, table heights, cashew nut sifters, etc.), should be redesigned on a priority basis. The redesigning should be based on women's anthropometric measurements.
7. Thirty-five per cent of all the research and development funds of national research and design institutes should be reserved for occupational health studies of women's work and working out changes in these for the convenience of women workers.

#### Recommendations Related to Future Research Areas

1. Multi-centered studies of health problems of women workers in specific occupational groups should be undertaken by the Indian Council of Medical Research (ICMR) on a priority basis. These studies should cover:

- a) the occupation related health problems - direct and indirect



- b) the general health problems of women workers,
- c) special stress should be on the effects of the triple burden on women.

2. National Institutes like the ICMR, ICSSR and other bodies should give a priority to research on health problems of the unorganised labouring women. It is a shame that a leading institute like the ICMR does not even have a women's cell to look into the health problems of half the country's population. However the present tendency of thrusting research related to women to a small cell is also questionable. This has implied in practice that the small cell conducts studies specifically on women, while the major portion of the personnel, research projects and finances of the institutes focus on men. In fact, what should happen is that while the entire institute, say, the ICMR or the National Institute of Occupational Health(NIOH) should focus on workers, both, women and men, the women's cell should try to take up issues related more specifically to women.

3. The ICMR, NIOH, National Institute of Design (NID) and such other organisations should undertake occupational health studies of women's work. These should be done with a view to developing simple preventive and protective mechanisms and machines acceptable to workers, which would reduce their health problems.

## STRATEGIES FOR IMPLEMENTING THESE RECOMMENDATIONS

Respecting the complexity of the situation of women workers, it is necessary to adopt a multi-pronged approach for women workers in different occupations and regions. An important aspect of this is the actual implementation of the present legislation where some of the provisions have already been legislated for some sections, as in the Beedi and Cigar Worker's Act, the Contract Workers' Act, the Minimum Wages Act. These legal provisions have largely remained on paper. It is also necessary to devise mechanisms for the implementation of these and other provisions to women workers in other occupations in the informal sector.

While it would be ideal to make a list of the various occupations women work in, and work out a whole set of legislations for these, incorporating the above mentioned provisions, the complexity of women's work in the informal sector would make such a simple approach meaningless, though it would be necessary to do so in certain occupations. But, by and large, women workers are compelled to change their occupations, depending upon the availability of work. For example, agricultural women workers, in certain seasons and during period of drought, would have to work at the employment guarantee schemes, as bidi workers, as domestic workers....When there is little work available, women workers may work as rag-pickers, as prostitutes. After a certain age, prostitutes may work as domestic workers.. Secondly, whichever occupation women workers may be economically active in, their socially productive and reproductive work does not cease. Hence, the social security and



health schemes that need to be worked out should apply to all women, irrespective of their particular occupation. This is also necessary because this society has created certain specific occupations for women and yet continues to victimise the women for it. It is difficult for women prostitutes to want to claim health care facilities, if they are compelled to reveal their profession, because they know they would be victimised in other ways for doing so. Women work day after day, producing future generations of workers as well as daily replenishing the existing labour force, working for social capital, gratis. Thus, every employer, private or public, should be made to pay for the facilities to women workers, irrespective of whether women are employed in the particular occupation or industry. This could be in the form of a common cess or levy.

In order to implement the above mentioned schemes and measures, some alternative mechanisms have to be worked out. Some of the possible alternatives are sketched below:

Occupations which are potentially, by the nature of their work, 'formalisable', like most of the occupations in the manual sector, should be so formalised in the form of Women Workers' Boards, which take up the responsibility, financially and structurally, to ensure the facilities outlined above. The finances may be collected through a specific cess or levy on every employer depending on the number of days the women have worked there and on the profit and turnover of the employer. These Boards would have the legal authority of ensuring that employers employ workers who are the members of the Board. This would take care of employers making some workers under-cut others



and weakening all the workers in the process.

These Boards would necessarily have to be, not huge centralised giants, but decentralised bodies, so that women workers would have some say and control in these. There could be say, one Board in one ward of a city and some similar area grouping at the town and village level. It would be possible for voluntary and other agencies and trade unions to act as watch-dogs and facilitate the smooth functioning of the Boards. To begin with, it is possible to start a Board in one or two occupations e.g. construction by involving different agencies and trade unions. Through the experience of the working of these Boards, a better fool-proof scheme could be evolved for the other occupations in the country.

At the same time, training courses for women should be organised -- training for skill upgradation e.g. learning masonry in the occupation of construction work, rather than the 'unskilled' nature of women's work today. Skill training should also be made available to women who do not want to do the work they are doing at present, but would like to change their occupation e.g. rag-pickers. It is also necessary that the Government establishes Women's Industrial Training Institutes, which train women in more marketable skills, with less health hazards.

In occupations, difficult to formalise, one could visualise a community-based structure, in which women could produce, exchange for the community and get paid for their labour eliminating the middlemen.



These general provisions for ensuring better health care, ensuring long-term betterment like education, and skill training, are important and can be concretised and initiated immediately. Those, however, which pertain to particular occupations like registration of women workers in the occupations, providing them with identity cards have to be worked out in the particular context of the different occupations. Identity cards for homebased workers are important in order that they can avail themselves of the legislative provisions like, the Beedi and Cigar Workers Act; However, no such move for prostitutes can even be considered as it would make them more vulnerable to exploitation and biased social prejudices. Hence, it is necessary to have greater in-depth consultations with women workers in different sectors to work out a detailed concrete plan of action and/or legislation.

The condition of women workers covered by legislation like the Minimum Wages Act, the Contract Labour Act and other protective legislation, is a strong testimony to the fact that today legislation has no teeth and the question of implementation of these laws leads to a vicious circle of the unorganised sections not being able to enforce legislation and remaining unorganised. This is especially true of poor women living and working in remote rural areas. A completely new mechanism for the enforcement of legislation needs to be worked out. One possibility is that trade unions and women's organisations may be given the authority of supervising the implementation of legislation.

Today, the executing authorities, like the Factory Inspectorate are not accountable to the workers of the

occupations and industries, where they are supposed to be executing the laws. It is necessary that a public accounting system be initiated, whereby the workers, and concerned organisations have access to the functioning of these authorities and are able to monitor these closely.

While formulating legislation regarding the health of women in the unorganised sector, it is necessary to consider the experience of existing legislation, though it does not cover the women in the unorganised sector.

The sections of the Factories Act, 1984, dealing with occupational health and safety, have a number of loopholes and flaws, which render them ineffectual. To begin with, the Act itself covers a very small section of the workforce. Workers who are within the purview of the Act too, find it difficult to benefit from it because 1) the individual workers who are affected have no role in the implementation of the Act; 2) the doctors are the only people who are supposed to report the notifiable diseases; 3) the managements are the only agencies to report the reportable accidents; 4) the workers or unions have no role to play in the enquiries of the accidents.

Besides, the implementation machinery is understaffed. They are not adequately trained and have no actual work experience. The law does not have teeth, as the penalty for the infringement of the safety laws by the management is paltry. The Workers' Compensation Act also limits the amount of compensation. Most workers are not even aware of the presence and role of the implementing machinery. Even the judgements about the worker's cases, e.g. the minimum wages cases, are delayed indefinitely.



It is necessary to avoid these pitfalls and evolve a completely new law enforcing and implementing machinery, adequately staffed with sensitive and well-trained people, making it directly accountable to the workers, with trade unions and concerned organisations supervising the implementation of all legislation.

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## APPENDIX

The following are excerpts of the studies commissioned by the Health Task Force which reached us late and the findings of which could not be incorporated in the main report. These studies reinforce many of the findings of the report and emphasise some of our recommendations.

Women, Work and Health - a case study  
of coal loaders in the railway yards  
of Ahmedabad

- Ahmedabad Women's Action Group (AWAG)

The Ahmedabad Women's Action Group (AWAG) has been working with this group of women manual workers who are coal-loaders and unloaders in the railway yards of Ahmedabad. AWAG has been trying to organise them. The methodology as well as the size of the sample is not known. Some of the findings of the present study are :

Though these women labourers contribute to the national economy, they are invisible. They help the Railways earn 70 per cent of the revenues through goods traffic. They are young, married women whose income makes a sizable contribution to the family earnings. They earn their meagre living as unskilled labourers.

Their health status is assessed through different approaches. Anthropometric measurements are taken, their oil consumption is studied as it is considered a sensitive indicator of economic well-being as well as of the family's nutritional intake. Finally, the morbidity pattern is studied along with their health seeking behaviour.

Compared to the mean weight of the women of rural Gujarat, their mean weight is not very low. However, all the women appear very thin with hardly any fat apparent on their bodies. Their weight comes close to the standard because their height is less. Again there are minor or relatively small regional variations in weight.

The measurements of arm circumference seem to indicate that the percentage of fat in the total mass in these women is less than the standard, but the percentage of muscle area relative to fat area is greater than the standard, although in absolute terms both are less than the standard. The muscle mass is indicative of the use of arm muscles in lifting/loading/unloading of heavy coal and sacks. Since they have very little fat stored in their body, their energy store is practically nil. Their mean blood haemoglobin level compares rather well with that mentioned for women of rural Gujarat.

Since the study group is homogeneous in terms of the nature of work, no significant relationship was found between the levels of haemoglobin or weight or arm circumference and per capita income. There is very little variation with regard to the level of education or caste in our study population to discern relationship between anthropometric measurements and these variables.

The average per capita oil consumption in the households of study population is 24.8 per day, which is nearly 40 per cent less than the recommended amount. The average oil consumption increases with increase in the per capita income, though not dramatically. Even in the highest income bracket, it falls short of the recommended amount.



Nearly 9 out of 10 women had said that in the event of an illness they would go to a medical practitioner. In the month preceding the study, 72 per cent women reported illness of which more than 80 per cent did go in for medical treatment. The most frequently reported complaint was fever while the incidence of other illnesses is small. Women appear to suffer various body aches and pains, but apparently accept them and do not seek medical aid.

It was found that the majority of the medical practitioners they go to, are not M.B.B.S. degree holders. The charges of practitioners of other degrees or systems of medicine may be low. Fifty per cent of the women reported that they could not pay their fees while 80 per cent could not buy the prescribed medicines. This could very well be the reason for their persistent illness. Fever at times drags on for five days to a fortnight, while various aches and pains are ignored. Twenty six per cent sustained injuries while at work.

The age of cohabitation appears to be going up among younger women. Most women start cohabitation before they complete the age of 17. It was also reported that most women gave birth to a child within two years of their cohabitation. It is thus evident that these women are burdened with not only the hard work of handling coal but also that of household responsibilities and bearing children before they themselves grow up, both physically and emotionally. At such a young age, child-bearing is risky for both mother and child and also tends to result in low birth-weight babies.

On an average by the time these women complete their reproduction, they give birth to six children each. This level of fertility is comparable to the level of fertility

in rural areas of India. The loss of children per woman is high. Out of six children they bear, on an average, only about 4.3 survive.

Only 40 per cent are able to rest for more than 3 months after child birth, the others cannot rest enough to recoup their energies. About 56 per cent of women reported delivering babies at home; Twenty two per cent at the public nursing homes.

Overall, it is quite evident from this effort at primary data collection on the health status and health seeking behaviour of women engaged in heavy physical work, that their energy store is almost negligent and in the event of an onslaught of any illness, they have nothing to fall back on. They have through experience learnt that the waiting time, hassle, etc., at civil and other Government hospitals, in the event of an illness, would cost them the day's wage. They rely, therefore, on private practitioners but cannot afford them or cannot buy all the prescribed medicines. In the ultimate analysis, even while they seek medical help, they hardly ever are completely cured. This does call for a serious look at the existing medical facilities in urban areas where people of low socio-economic status groups live.

Backpain in women

- possible relationship to prolonged calcium deficiency and bone thinning (osteoporosis)

- Veena Shatrugna, Nirmala Soundarajan,  
P. Sundaraiah and Leela Raman

### Introduction

In all studies on the health problems of women in the self-employed sector, for eg. of women who are beedi makers.



lace makers, domestic servants, construction workers, cobblers, rag pickers, agricultural labourers, cart pullers, women employed in various agricultural jobs such as weeding, transplanting etc. and women in many many other jobs - back pain tops the list of symptoms. It has so far been the experience of women that doctors usually ignore this complaint and pass on to the next one, but if women persist, then they are usually dismissed with pain killers that work for only 4 to 6 hours. Other professionals find this "complaint" a nuisance and very often scold the patients and blame them for their bad posture, or tell them to stop complaining. Medicine/medical practice does not find women's diseases "exciting" and back pain in particular, has the knack of staying on and on.....!

This study was carried out in two parts - (i) Retrospective and (ii) Study of currently admitted women in the orthopaedic ward of the Osmania General Hospital, Hyderabad.

1. Retrospective : This study was designed to look into the actual incidence of various fractures in women admitted in the hospital in the last ten months (between Jan-Oct.1987). All women in the age groups of 18 years and above who were admitted in the Ward were included and the following details were sought from the case sheets obtained from the Statistics Department of the Osmania General Hospital, Hyderabad.

- (i) Name, (ii) Age, (iii) Occupation, (iv) Income
- (v) Place of residence, (vi) Diagnosis,
- (vii) Completion associated with the fracture, such as hypertension, diabetes and anaemia,

(viii) Other significant information such as visit to traditional bone setter etc.

Out of 297 women admitted between Jan-Oct. 1987, 289 case-sheets were retrieved from the Statistics Department. Eight records could not be traced. For the sake of comparison, a 10 per cent systematic sample of all the men admitted during the same period was used to study the incidence of osteoporotic fractures in the men's wards. 107 case records were used for this purpose. Though total admissions were 1112 for the 10 months, instead of 111 records we could trace only 107 for the purpose of the study. As much information as necessary was retrieved from the male case sheets.

2. Qualitative study: (See tables) Of women currently admitted in the ward, thirty-seven adult women, who were currently admitted (Sept-Oct. 1987), were interviewed to obtain certain information that was not found in the case records. The interviews were conducted in two or more sittings. Very often women themselves refused to participate in the discussion, so we tried to get the information from the women attending on the patient. The hospital conditions are such that the attendant (invariably a close relative of the sick person) suffers all the travails that the ill person does.

The patients were asked a detailed open ended questions which included the following:

- (i) Name, (ii) Age, (iii) Age of menopause,
- (iv) Present or past occupation (the occupation that she had been engaged in for most of her life)
- (v) Income (present or past) (vi) The person supporting her at the time of fracture, (vii) Family size, (viii) Number of pregnancies, working during pregnancies, place of deliveries, breast feeding pattern, number of live children and the number of



dead etc. (ix) Food intake (a qualitative diet survey to indicate calcium intake) (x) Problems of food in the hospital (xi) Other problems in the hospital, (xii) History of drug taking - specially corticosteroids etc.

The case records available in the Ward were used for information such as diagnosis, operations, complications and need for blood etc.

### Results and Discussion

Of the 289 case records of women that were scrutinized, 209 women were 40 years or older while eighty women were between 18 and 39 years (Table-1). In the older age groups, most of the fractures resulted from either minimal trauma or while walking. 145 of them above the age of 40 had been admitted for fracture neck of femur, which is typical in bones that have been thinned out in this age group. They formed about 70 per cent of all women above forty. Another 14 per cent of women in the over-forty age group had other fractures also suggestive of osteoporosis (Table - 2), while the rest of them in this age group had fractures due to external injury (due to accidents at worksite or violence). The younger women (< 40 years) comprised 27.7 per cent of the total admitted. They had been admitted with fractures related to work such as agricultural work, construction work etc. Since women's occupations were not recorded in the case records, it was difficult to compute data on work related accidents but the case histories suggested that they were work related such as fall in a well during deepening, accident at construction site, fall from a roof, injury near

a stone crushing machine, fall from a tree, from a bullock cart etc. A large number of accidents at the work site were labelled medico-legal and it would be interesting to see if these women received any compensation from their employers (Medico-legal cases are pursued only when it results in the death of the injured). In the work related injuries, claims for compensation can be filed, but women from these poor backgrounds are not even aware of these provisions. Often they are unwilling to take action because they are understandably dubious about the results. What was important was their desire to get well and get back home. This is obvious from the qualitative study.

Though fracture neck of femur and other osteoporotic fractures are the most common types in all ages after 40 years (Table-3), what is surprising and definitely alarming is that after 60 years of age only this type of osteoporotic fractures are seen in women. It is also recognized that once an osteoporotic fracture occurs, then these women are very often more prone to repeat fractures. In the case of men, it appears that trauma due to vehicle accidents and occupational accidents are largely responsible for the fracture incidence. They are therefore much younger on admission (57% were less than 40 years) (Table-1) as seen from the case records.

Though 31 out of 107 men had fractures at the sites that are typically seen in osteoporotic bones - a look at the ages and history of accidents showed that most of the men (18 out of 31) had sustained fractures at these sites due to an impact received during the accidents (Table-4) and only 13 men could be classified under the osteoporotic category. None of these men had left the hospital before the completion of the course of treatment.



### Period of stay and "absconding" cases.

Of the 176 women with osteoporotic fractures who were required to stay between 15 days and 45 days in the hospital (depending on a host of factors such as type of fracture, need for operation, associated complications and progress of of the patient) what was surprising was that 55 (31 per cent) women left the hospital without undergoing the course of treatment such as traction, operation and they were labelled as "absconders", while about 49 (28 per cent) women had arrived at the hospital many days or weeks after the fracture had occurred. It appears that this group of women both "absconders" and "late reporters" (59 per cent) preferred to go to traditional bone setters or doctors nearby who did not insist that they stay in the hospital. There is an urgent need to study and understand the services offered by these practioners. They could be offered crash courses in bone anatomy and taught how to read the X-rays, so that treatment offered by them becomes more significant for the speedy recovery of fractures in women.

### Associated diseases.

Out of the 176 women only 56 women (32 per cent) had blood pressure recordings entered in their case sheets and 33 of them were hypertensives; 142 (81 per cent) women had been investigated for diabetes and 21 of them were diabetic. Also of the 121 (64.75 per cent) women investigated for anaemia, 70 (57.85 per cent) were anaemic. All these factors contribute to delay in recovery and result in complications. In fact, very often women become unfit for operative procedures due to the associated factors such as diabetes, hypertension and anaemia.

### Other relevant details.

It was not surprising that certain kinds of information do not find a place in medical records. A system that concentrates its energies on treatment and operative intervention, divorces itself from the socio-cultural background of the patient. This is the only way the men and women, working round the clock in the orthopaedic ward can "work efficiently". Any emotional involvement in the patients' problems, such as the social determination of women's illness, due to long years of neglect would need a different kind of a hospital - an altogether new set-up. The understaffed and overworked medical department is equipped to deal with the "diseases" or "problems". Hence, it is not surprising that such information is just not found in the case sheets. Even the economists and statisticians dealing with work and labour had not recognized women's contribution to the economy, the doctors could hardly behave differently.

### Occupations and obstetric history.

Thirtythree of them had worked at some occupation or the other all their lives, while four were "housewives", but even they had worked long hours in large families all their life, with very little money reserves. The working women had worked mostly as agricultural labourers, weavers, cobblers, construction workers and domestic workers. All of them had worked throughout pregnancy till term, and had breastfed their children for 2-3 years. None of them had any antenatal care during pregnancy and they had delivered at home. They had been working at home till the day of fracture, cooking, sweeping, minding the grand-children and even filling water. It was really difficult to get them to remember any time in their lives when they had not worked.



There was obviously a lot of irritation when we asked a questions that were obvious. Except one, all of them had borne children (two to twelve). What was significant was that they had all lost atleast half the number of children at different ages. As already stated, the abortion history could not be elicited with confidence, but there had been abortions. There was nothing that marked them from the other women of their age and class (in terms of pregnancies and lactation) or any other event that made them more prone to fractures.

#### Present family size and related problems of patient care.

Except two of them, who lived alone, all the others lived in a 'family' with son, daughter-in-law and grandchildren. A few lived with brothers, daughters or sisters, and the number of members living under the same roof with them varied from 3 to 10. There were however, many problems that they faced in the hospital, and these could be solved only with increased and sympathetic manpower (women power). Only daughters and sisters had come to take care of them in the hospital and this resulted in the need to appease the son-in-law's family who seemed to have exclusive right over the services of sisters and daughters. Some of them had no fixed person taking care of them in hospital and they were strapped to the bed in plaster, immobile, lying there without anyone attending on them, waiting the whole day for some one to arrive. They were entirely at the mercy of the wardboys, the attendants of neighbours and the overworked, harassed nurses. They naturally could not get up to answer the calls of nature and were even seen pleading with the passers-by.

### Problems of money, food and general care.

Women have always nursed the sick at home. Infact, they have taken care to see that the children and old people get food, clean clothes and medicines even if it had meant borrowing, working hard and staying up nights. When women fall sick, there are two problems. When the provider of these very services needs help only another woman can step into this role depriving her own family of these services. Again a woman in her fifties is simply not the central figure in poor families to command time and money, specially for herself. Infact, she is a liability, the day she has stopped earning. It is therefore not surprising that women admitted to a hospital for a problem like fracture cannot expect to get her meals in time or money spent on transport, tipping and other expenditure to maintain her and her attendants in hospital. Many women were seen waiting for food even upto 3 P.M. when food would be sent for her and her attendant and it would have to be stretched for the night also. The hospital set-up provided food only to the so-called green card holders (a ration card issued to a category of households in Andhra Pradesh earning less than Rs.5000/- year). But there are many families that cannot get hold of this green card or even if they have no knowledge that it must be taken to the hospital - when there is a crisis such as fractures or other illnesses.

This policy of the State Government Hospital leaves many women without support from the government or the family and it is therefore not surprising that the family prefers to take the women away "against medical advise". The real reasons being elsewhere and partly because of the "inability" to cope, with a hospitalized woman which drains the family of money and



requires a large army of people commuting between the hospital and home to nurse one person in the hospital. They would cut-short the treatment rather than deploy all the resources and persons for the sake of one individual and that too a woman ! An old woman just did not have a right to that much. A preliminary survey of the men's ward revealed that most of them had food sent to them even twice a day, unless they were destitutes; wives or other women at home obviously managed - took care of the home, children, cooked and then rushed food to the hospital.

In one instance we saw an attendant in the women's ward huddled in a corner - afraid that she would be chased out. She had not eaten anything and did not have any money. She was afraid that once chased out, she would be unable to gain access to the Ward because she did not have money to tip the gate-keeper and her patient would be unattended. Her people were expected from the village sometime later and only then she could dare to venture outside, armed with some money and confidence. Somehow the wretchedness of their condition is just not seen or recognised by the medical personnel so busy with the day to-day treatment. The dehumanising condition in a hospital must take responsibility for the large number of "absconders".

### Food intake.

Diet history of the patient were taken with the intention of getting details of frequency of intake of certain foods rich in calcium. It revealed that the foods were monotonous and cereal based and the main cereal was eaten twice or thrice a day with a pulse, chillies or onions.

Pulses were consumed twice or thrice a week and vegetables on the day that pulse was not made. The cereals eaten were usually rice, wheat or jowar, while redgram dal was the major pulse, green leafy vegetables were consumed only seasonally. There was absolutely no intake of milk or curd. Some of them consumed weak tea once or twice a day and rarely buttermilk. In this group of women 30 out of 37 were not pan chewers. Eggs and meat were virtually absent from their diets because they were so expensive. If the budget permitted, 1/4 or 1/2 kg. of meat was bought once a month for a family of 6-10 and it was stretched for the whole day.

We could not probe deeper into other social equations which would have a bearing on their food intakes - such as the existence of large families, control over incomes and even the relationship between the woman and the earning members in that household. Women who were in great pain were impatient with the direct questions. The presence of the attendants also precluded certain kinds of discussion.

### Conclusions.

This study does not lend itself to simple solution or recommendations and therefore such an attempt will not be made. Most of the times, "solutions" have been demanded of the medical profession for implementation by the policy makers. Therefore, most problems had to be posed in such a manner that the research findings lent themselves to some kind of a quick conclusions. These in-turn helped to either close certain chapters of the problem for research for a few decades or the conclusion helped open up new avenues for the knowledge hungry researchers (but the new area of enquiry have been determined by the manner in which the problems were posed).



So far osteoporosis has been labelled physiological due to the onset of menopause in women (even though incidence of osteoporosis is much higher in older age groups in women even in the West compared to cardiovascular problems and diabetes). Such a description precluded any kind of further work in this field. It helped blame the victim by invoking pet assumptions about womens' aging bodies and (?) minds ! So much for "Scientific Enquiry". This "Conclusion" also helped absolve every one of responsibility and placed the problem of osteoporosis outside the purview of medical research. At best, it offered hormones to reverse the "degenerating" process and perhaps psychiatric help for coping with "menopause".

More recently other solutions have been offered by the medical scientists (since the discipline is structured to offer solutions to a deranged human body). Towards this the problem had to be so defined that the cause of osteoporosis could be located precisely in "chronic calcium deficiency" and could at best be only partially true, but it opens up new horizons and prioritizes problems for research, these being the various interactions between calcium supplementation and other nutrients. But before that would start the search for an effective calcium salt, easily absorbable and simple to produce and later research would have to be carried out to look for the relationships of other nutrients with calcium salt supplementation. The other nutrients being (a) vitamin D, (b) proteins, (c) iron, (d) fats, (e) phosphorus etc. and each of the above combinations or alone in relation to hormone replacement therapy and its side effects, toxicity (such as renal stone formation etc.), carcinogenicity with the various regions, would need to be researched in detail.

Such a scientific mode of enquiry definitely serves to deflect the whole question of osteoporosis into areas that have no relationship to women's day-to-day lives. It becomes important that the complexity of the problem is recognised and what follows is not necessarily exhaustive. Certain significant aspects would have been missed, given the short duration of the study.

1. The impact on the bodies and bones of women brought about by the rigid practices of upbringing of young girls to perform the primary function of wives and mothers - highlighting "femininity" which requires the forceful adoption of postures detrimental to bone integrity, what occurred due to foot binding in China is an obvious example, but unresearched consequences of the veil in parts of India involving bowing and covering the head for most of the day, the use of tight corsets in Europe, the current popularity of shoes on stilts all over the world; the strain induced by bust/hip emphases encouraged by a culture, the hunched backs adolescents develop, are part of the same problem. In the name of femininity, a whole array of disciplining methods are used for girls when sitting, standing, walking or working resulting in the moulding of both bodies and minds!

2. Impact of illiteracy 75 per cent of girls are denied the few advantages that the written word offers) early marriage, pregnancy and nursing ensures the making of a wife and mother. It is therefore not surprising that women who have been disciplined into living for "others" start denying themselves whatever little protective foods are available for the family.



3. The impact of the long hours of monotonous work in fixed postures that women are said to do better than men and at much lower wages ! (electronics, transplanting, home-based industry ).

4. The unknown areas of women's lives such as the experience of illnesses and crippling diseases during old age in women.

5. The macro policies of a system - be it the Green Revolution or the White one - and its impact on village economics - the food and milk surpluses in the urban areas created by the market mechanism, resulting in the marginalization of the poor and specially women.

6. The feeble attempts made by women to compensate for the deficiency of nutrients like calcium and iron by resorting to pan chewing or "pica" - (a practice involving the consumption of non-food items such as sand and clay, very common during pregnancy). Infact, in certain parts of North India (Punjab and Rajasthan) a particular type of clay is specially dried and made available to the pregnant women - perhaps the only source of calcium. This needs to be researched.

7. The inadequate role of the health set-up, equipped as it is to treat fractures with tractions, pins and other operative procedure. It can be at best put on a brave front and systematically evolve more "effective" and "sophisticated" procedures to put women back on their feet, but in the case of recurring, even chronic fractures that result from oestoporosis, it is hardly an adequate response.

8. The urgent need to understand why women find it so difficult and sometimes impossible to get access to and effectively use hospital facilities ! What in fact lurks hidden behind the convenient term "absconders".

It appears that it takes around forty years or more before women break down - with the system treating them with contempt and pushing them into a corner as girls, wives, mothers, or grandmothers - finds that sure enough women give way - either their bones or their minds in more ways than we know and there obviously is no simple technical solution to that !



Table - 1

Distribution of the women and men included for the study

Age in year	Women	Men
$\angle 40$	80 (27.7%)	61 (57%)
$\geq 40$	209 (72.3%)	46 (43%)
Total:	289	107

Table - 2

Kinds of fractures in women over the age of 40

Kind of fracture	No.	%
Neck of femur	145	69.3
Shaft of femur	18	8.6
Humerus (Colle's)	8	3.8
Pelvis	5	2.4
Others	33	15.9
Total:	209	100.0

Table - 3

Kind of fractures in women over the age of 40 years

Age in years	NF	F	H	P	Others	Total
40-50	30 (44.1)	12 (17.6)	4 (5.8)	3 (4.4)	19 (27.9)	68 (100)
51-60	58 (77.3)	4 (5.3)	3 (4.0)	1 (1.33)	9 (12.0)	75 (100)
61-70	34 (85.0)	1 (2.5)	1 (2.5)	1 (2.5)	3 (7.5)	40 (100)
71-80	19 (90.4)	-	-	-	2 (9.6)	21 (100)
7/ 80	4 (80.0)	1 (20.0)	-	-	-	5 (100)
Total	.....	.....	.....	.....	....	209

Figures in parenthesis indicate percentages:  
 NF - Fracture of neck of femur; F - Fracture of shaft of femur  
 H - Fracture of Humerus; P - Fracture of pelvis.



Table - 4

Incidence of fractures in men (at the same sites that  
are normally associated with osteoporosis) in  
relation to trauma and age

	<u>&lt;</u> 50	51-60	61-70	<u>7</u> 70	Total
Trauma					
(accidents, alcohol)	13*	3	2	-	18
No trauma	3	6	2	2	13
(Osteoporotic)					
Total	16	9	4	2	31

\* 7 out of the 13 men were below the age of 40 years.















